NPL-UT-3-L78-R4

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May 1, 1989

Mr. Stephen Lingle
Director, Hazardous Site
Evaluation Division
Office of Emergency and
Remedial Response
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

ATTENTION: NPL Staff

Re: Supplemental Comments on NPL Update #7

Dear Mr. Lingle:

The Firestone Tire & Rubber Company ("Firestone") respectfully submits these supplemental comments on the United States Environmental Protection Agency's ("EPA" or the "Agency") proposal to include on the National Priorities List ("NPL") Firestone's closed tire manufacturing plant in Albany, Georgia. See 53 Fed. Reg. 23988 (June 24, 1988). Firestone requests that the Agency accept these supplemental comments and consider them in its final rule.

Firestone's original comments, submitted August 23, 1988, objected to the inclusion of the Albany plant on the NPL on the grounds that EPA's scoring of the site did not take into account the comprehensive site assessment and extensive remedial activities Firestone had performed. As part of its voluntary efforts to remediate the site, Firestone has continued to conduct quarterly monitoring of conditions at the plant. Data from the fourth quarter 1988 sampling confirm that the Albany plant should be deleted from the final NPL.

The attached report from Firestone's consultant concludes that "although volatile organic compounds continue to be present in a number of monitoring wells in the residuum and the upper Ocala, no adverse impact has been detected in the productive zone of the Ocala." Report at 5 (emphasis added). The report includes groundwater elevation data demonstrating the radially inward flow of groundwater in zones in which compounds have been detected. Report at 2-3. The data further show a general decrease in compound concentrations in residuum groundwater with several contaminants now below maximum contaminant levels, the exception being well MW-1-2. Report at 3-4. Similarly, data from the upper Ocala groundwater wells showed decreased compound concentrations. Report at 4.

The addition of these data to the administrative record demonstrates conclusively that Firestone's Albany plant should not be included on the final NPL.

Very truly yours,

P1E.D

Paul E. Gutermann

Counsel to Firestone Tire &
Rubber Company

L99/PEG:aq

cc: Mrs. Renee Hudson, Georgia DNR
Mr. Greer C. Tidwell, EPA Region V

RESULTS OF FOURTH-QUARTER SAMPLING
THE FIRESTONE TIRE & RUBBER CO.
ALBANY, GEORGIA FACILITY

1.0 INTRODUCTION

As authorized by The Firestone Tire & Rubber Co. (Firestone), Woodward-Clyde Consultants (WCC) has completed the fourth-quarter groundwater sampling and analysis at Firestone's former tire manufacturing facility in Albany, Georgia. This work has been performed as the continuation of a voluntary site assessment undertaken by Firestone as part of its facility closure operations.

This report provides a summary of sampling procedures and an assessment of the data generated.

2.0 SAMPLING PROCEDURES

Groundwater samples were obtained on 26 and 27 October 1988 in accordance with the revised Groundwater Sampling and Analysis Plan (dated 03-01-88), which was submitted with the First-Quarter report.

Fifteen (15) samples were collected on 26 October 1988, and included a duplicate of PW-2 (ALB-PW-3-1088) and a field blank (ALB-MW-8-1-1088). Seven (7) samples were collected on 27 October 1988 and included a duplicate of MW-1-4 (ALB-MW-8-2-1088) and a field blank (ALB-MW-8-3-1088). All samples were shipped by overnight courier in an iced, insulated shipping container on 27 October 1988. The shipment included a trip blank.

3.0 GROUNDWATER ELEVATIONS

Groundwater levels were measured in all wells on 26 October 1988. Summaries of groundwater elevations are presented on Table 1 and Table 2. Table 2 contains elevations grouped by formation monitored (e.g. - residuum, upper Ocala, deep Ocala).

Groundwater elevations were plotted on base maps of the site for evaluating groundwater flow trends. The data for the soil (residuum) monitoring wells are plotted on Figure 1 and suggest a flow trend to the east-southeast, with an apparent "sink" in the courtyard area. This pattern is consistent with previous measurements.

The groundwater elevation data for the upper Ocala monitoring wells are plotted on Figure 2. The data suggest an apparent groundwater sink both in the courtyard area and at the west-central side of the plant facility, causing a radially inward flow of groundwater. These conditions remain consistent with previous measurements.

The groundwater elevation data for the deep, productive zone of the Ocala are plotted on Figure 3. The data continue to indicate a southwesterly trend of groundwater flow.

4.0 CHEMICAL ANALYTICAL RESULTS

The groundwater samples were analyzed for purgeable halocarbons and purgeable aromatics by Aqua Tech Environmental Consultants, Inc. of Melmore, Ohio. Methods 8010 and 8020 (SW-846) were employed as the analytical procedures. The laboratory's report is contained in Appendix A. The analytical results are summarized by water-bearing stratum in Tables 3, 4 and 5. The summary data in the Tables includes "flags" denoting sample results that exceed an established Final Maximum Contaminant Level (MCL) or exceeds a Proposed MCL. The comparative criteria are presented on Table 6.

Table 3 provides a summary of analytical data for wells set in the soil (residuum) groundwater system. With the exception of MW-1-2, those wells that had no previous organic contaminants (MW-7-8; BMW-2; BMW-4) continue to have no contaminants. The sample from MW-1-2 again contained trace concentrations of 1,1-DCE (1.7 µg/l) and 1,1,1-TCA (2.4 µg/l), and also contained benzene (6.5 µg/l). In the courtyard area (Figure 4), well MW-1-4 was reported to still contain the three compounds usually detected (1,1-DCA; 1,1-DCE; 1,1,1-TCA). All three compounds again appear to have decreased in concentration and the concentration of DCE fell below the MCL. In the southern portion of the property, well BMW-3 contained

1,1-DCA and 1,1-DCE at concentrations similar to previous samples. The DCE concentration did not exceed the MCL. Well MW-12-1 exhibited concentrations somewhat lower than the previous two rounds of samples. Only the concentrations of DCE exceeded MCL's. However, the sample from MW-12-1 did appear to contain benzene in excess of the MCL. Benzene had not previously been detected at this well in any samples.

Samples from three upper Ocala wells in the courtyard area (MW-1-1; MW-1-3; MW-1-5) continue to contain detectable concentrations of organic compounds. Well MW-1-1 (Figure 5) exhibited fuel components (benzene, toluene, ethylbenzene) and chlorinated compounds (DCA; DCE; TCA). Concentrations of benzene and DCE exceeded MCL's. Well MW-1-3 exhibited compound concentrations similar to the previous event sample, with DCE and TCA continuing to exceed MCL's. Well MW-1-5 again contained four compounds (DCA; DCE; TCA; TCE) with DCE exceeding the MCL. Samples from wells RW-2 and RW-3 continue to show trace concentrations of 1,1-DCA, but at less than 1 µg/l. Wells RW-1 and MW-1-6 continue to be free of organic compounds.

Table 5 provides a summary of data for wells developed in the deep, productive zone of the Ocala. As indicated, all wells continue to be free of volatile organic compounds.

5.0 SUMMARY

Based on the results of one year (four quarters) of monitoring work, the following summary statements can be made:

1. There continues to be a groundwater "sink" in the general central area of the plant, affecting the flow in the soil (residuum) and upper Ocala systems.

2. The flow trend in the deep, productive zone of the Ocala, continues to be southwesterly.

3. The number of organic compounds in samples from wells in the soil (residuum) groundwater is similar to historical conditions with MCL's exceeded at two wells (MW-1-4; MW-12-1).

   a. Compound concentrations in MW-1-4 (residuum-courtyard) appear to indicate a general decrease, with DCE falling below the MCL. However, MW-1-2 now appears to contain trace (1 to 2 µg/l) concentrations of DCE and TCA and, in the east event, also contained benzene in excess of the MCL. Historically, MW-1-2 had been "clean".

   b. Compound concentrations in MW-12-1 (residuum-pond area) initially increased then decreased over the year. Concentrations are still higher than during the initial investigation, and benzene and DCE exceeded the MCL as of the fourth quarter.

   c. Well BMW-3 exhibited no significant fluctuations in compound concentrations and no compounds have exceeded MCL's.

4. The number and concentrations of organic compounds in the upper Ocala groundwater fluctuated in various wells.

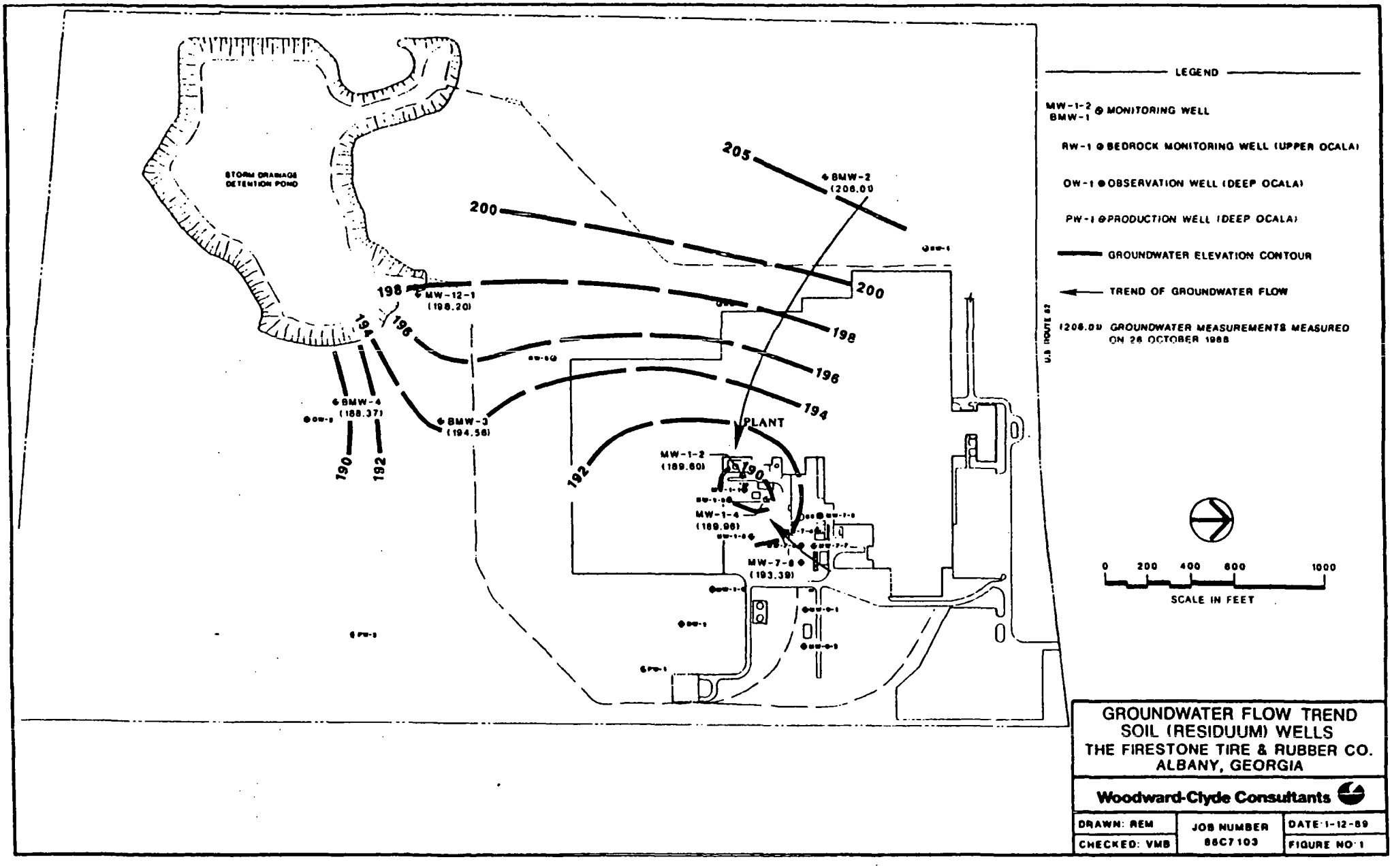
   a. Concentrations of fuel components and chlorinated compounds were below detection limits in MW-1-1 in the first quarter, but the number and concentrations of compounds subsequently increased. Benzene and DCE exceeded MCL's in the last two quarters. However, compound concentrations have decreased overall since the initial investigation.

   b. Well MW-1-3 exhibited an overall increase in organic compound concentrations with DCE and TCA continuing to exceed MCL's.

   c. Well MW-1-5 exhibited a general decrease in compound concentrations. As of the fourth quarter, the concentration of DCE remained slightly above the MCL.

5. Organic compound concentrations in the deep, productive zone of the Ocala continued to be below method detection limit during the entire monitoring period.

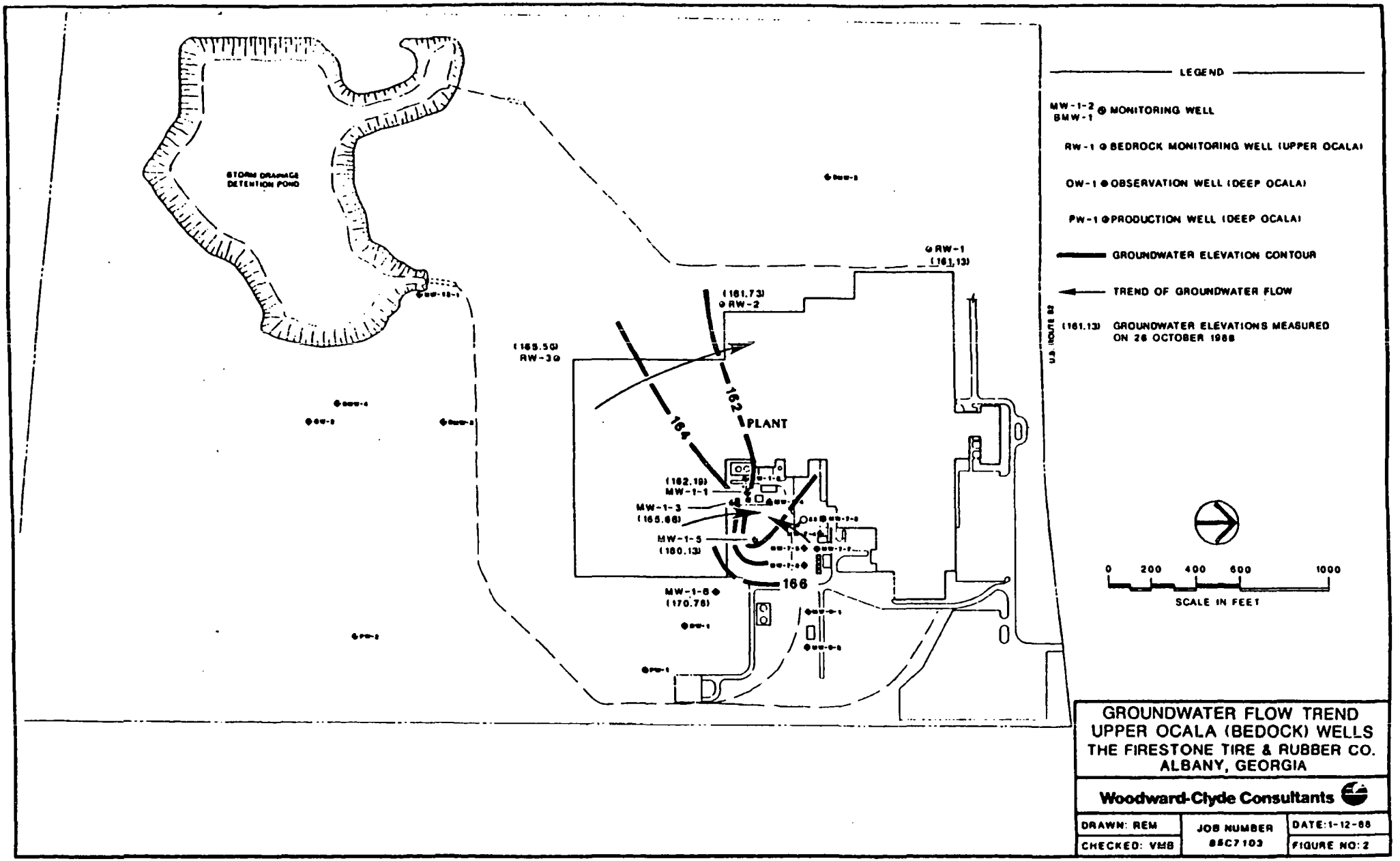
Given the monitoring results to date, although volatile organic compounds continue to be present in a number of monitoring wells in the residuum and the upper Ocala, no adverse impact has been detected in the productive zone of the Ocala.



GROUNDWATER FLOW TREND
SOIL (RESIDUUM) WELLS
THE FIRESTONE TIRE & RUBBER CO.
ALBANY, GEORGIA

Woodward-Clyde Consultants

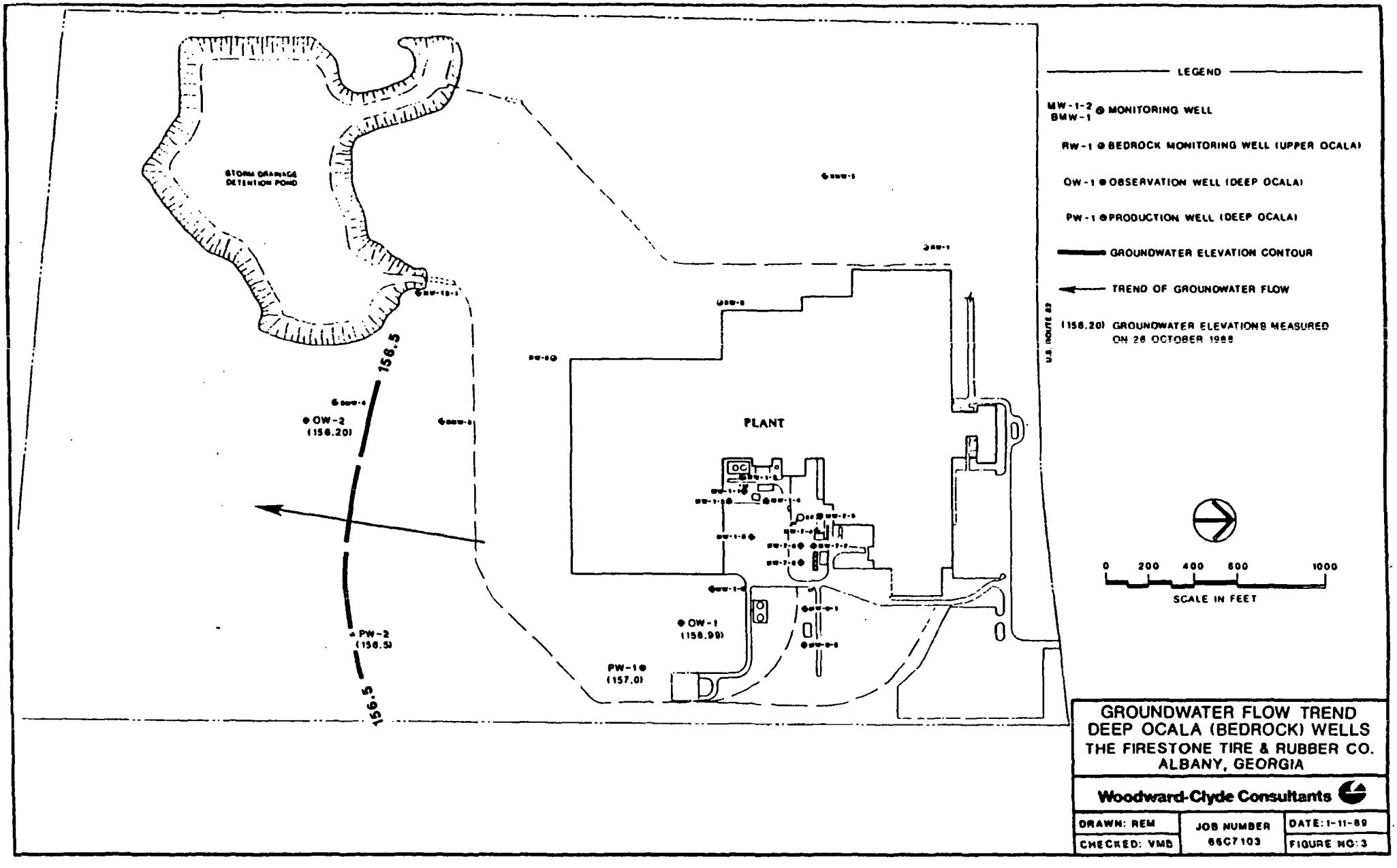
DRAWN: REM	JOB NUMBER	DATE: 1-12-89
CHECKED: VMB	88C7103	FIGURE NO: 1

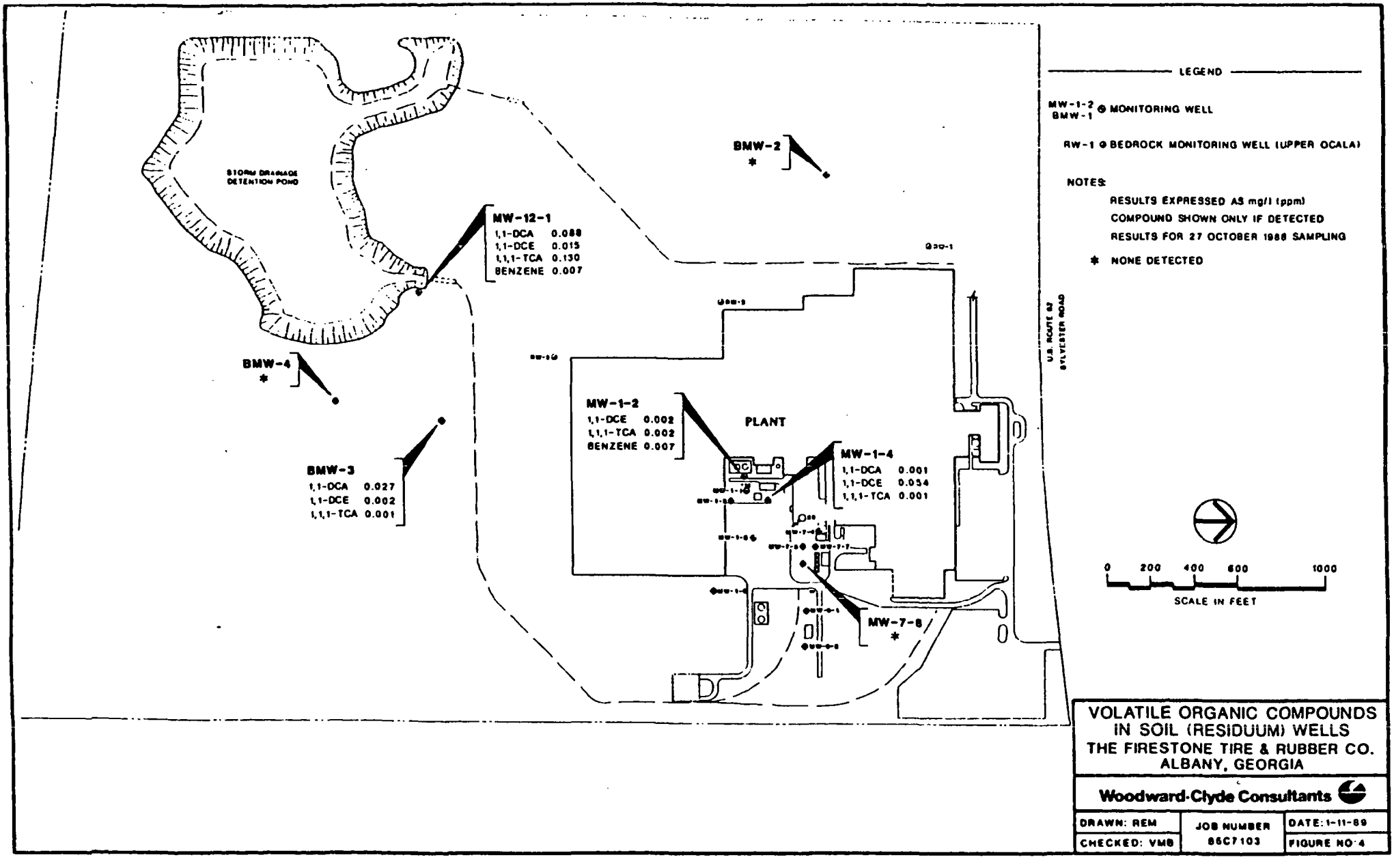


GROUNDWATER FLOW TREND UPPER OCALA (BEDOCK) WELLS THE FIRESTONE TIRE & RUBBER CO. ALBANY, GEORGIA

Woodward-Clyde Consultants

DRAWN: REM	JOB NUMBER 85C7103	DATE: 1-12-88
CHECKED: VMB		FIGURE NO: 2

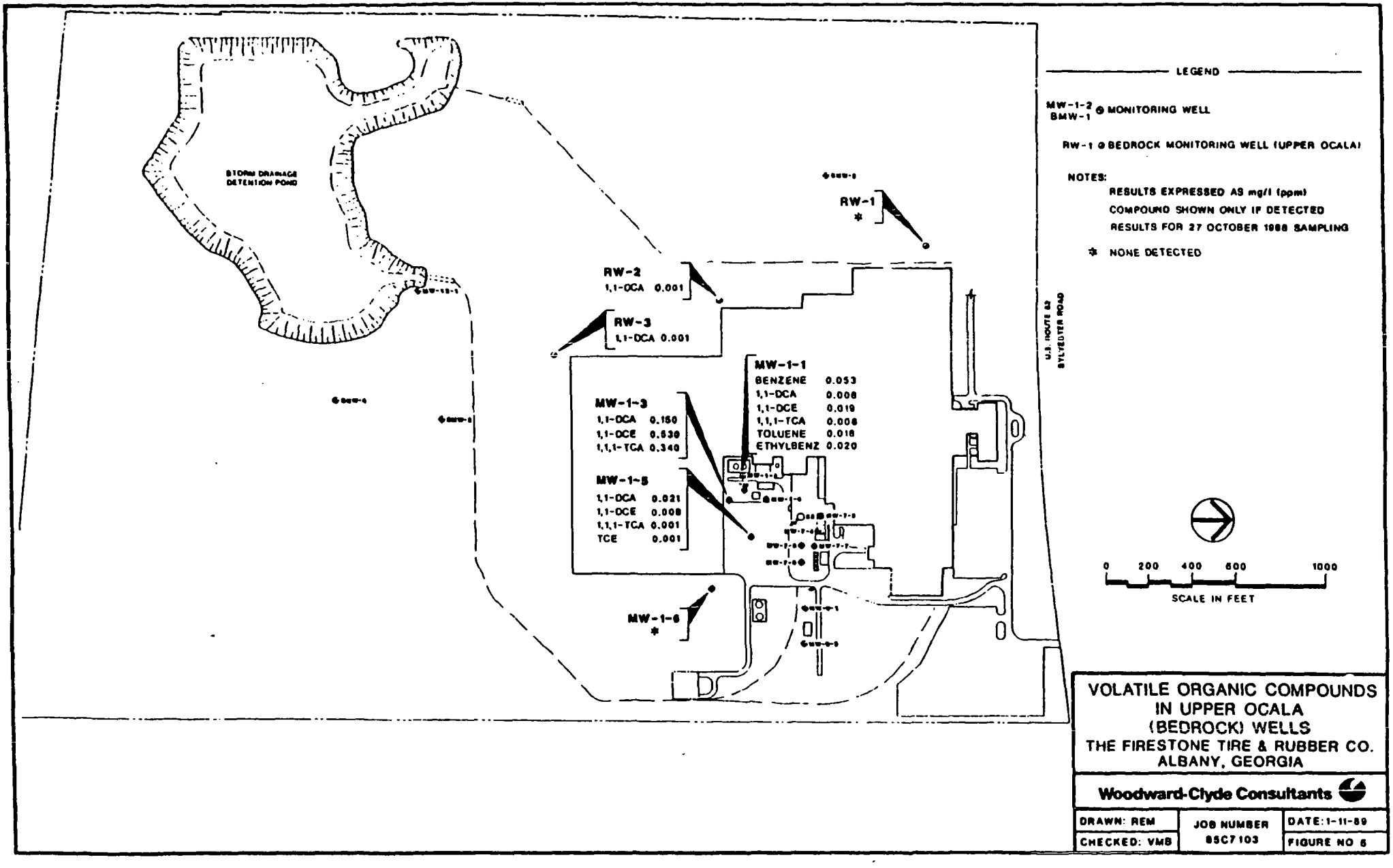

LEGEND
MW-1-2 BMW-1 MONITORING WELL
RW-1 BEDROCK MONITORING WELL (UPPER OCALA)
OW-1 OBSERVATION WELL (DEEP OCALA)
PW-1 PRODUCTION WELL (DEEP OCALA)
GROUNDWATER ELEVATION CONTOUR
TREND OF GROUNDWATER FLOW
(156.20) GROUNDWATER ELEVATIONS MEASURED ON 26 OCTOBER 1988
STORM DRAINAGE DETENTION POND
PLANT
U.S. ROUTE 82
156.5
OW-2 (156.20)
OW-1 (158.99)
PW-1 (157.0)
PW-2 (156.5)
0 200 400 600 1000
SCALE IN FEET
GROUNDWATER FLOW TREND
DEEP OCALA (BEDROCK) WELLS
THE FIRESTONE TIRE & RUBBER CO.
ALBANY, GEORGIA
Woodward-Clyde Consultants
DRAWN: REM
CHECKED: VMB
JOB NUMBER 86C7103
DATE: 1-11-89
FIGURE NO: 3



VOLATILE ORGANIC COMPOUNDS IN SOIL (RESIDUUM) WELLS
THE FIRESTONE TIRE & RUBBER CO. ALBANY, GEORGIA

Woodward-Clyde Consultants

DRAWN: REM	JOB NUMBER	DATE: 1-11-89
CHECKED: VMB	86C7103	FIGURE NO. 4



VOLATILE ORGANIC COMPOUNDS IN UPPER OCALA (BEDROCK) WELLS THE FIRESTONE TIRE & RUBBER CO. ALBANY, GEORGIA

Woodward-Clyde Consultants

DRAWN: REM	JOB NUMBER	DATE: 1-11-89
CHECKED: VMB	85C7103	FIGURE NO 6

TABLE 1. SUMMARY OF GROUNDWATER ELEVATIONS FIRESTONE - ALBANY, GEORGIA

Well No.	Ground Elev.	02/17/86	03/24/86	05/27/86	09/19/86	10/15/86	05/04/87	01/19/88	04/20/88	07/27/88	10/26/88
MW-1-1	213.4	168.24	167.79	162.69	159.89	159.69	169.49	162.14	163.59	163.11	162.19
MW-1-2	214.0			188.95	187.55	186.00	192.75	201.24	200.24	189.85	189.60
MW-1-3	212.1			167.80	163.40	162.90	173.10	165.24	169.77	167.00	165.66
MW-1-4	212.6			188.25	183.60	182.60	193.90	188.56	194.28	189.72	189.96
MW-1-5	212.2			160.42	159.47	159.37	168.47	160.22	166.07	161.28	160.13
MW-1-6	214.5					[155.5]	176.91	167.34	173.78	170.81	170.76
MW-7-3	214.8	210.34	209.69	205.14	destroyed						
MW-7-4	214.8	191.03	197.10	188.38	replaced	[175.4]	[175.4]	[175.4]	[175.4]	[175.4]	[175.4]
MW-7-5	212.9			164.64	*	[163.3]	[163.3]	broken			
MW-7-7	213.8			168.80	destroyed						
MW-7-8	212.6			185.44	187.59	185.54	190.94	195.41	195.49	188.18	193.39
MW-9-1	212.2	[168.6]	[168.6]	[168.6]	[168.6]	[168.6]	171.87	[168.6]	[168.6]	[168.6]	[168.6]
MW-9-2	211.4	[177.9]	[177.9]	[177.9]	[177.9]	[177.9]	[177.9]	[177.9]	[177.9]	[177.9]	[177.9]
MW-12-1	206.3	201.13	198.93	196.68	197.08	197.18	197.63	200.97	200.88	198.30	198.28
BMW-2	210.5	205.51	205.36	204.06	203.11	202.71	205.41	206.10	208.19	206.11	206.01
BMW-3	214.0	200.94	195.74	185.99	186.09	189.44	194.44	197.39	198.73	193.14	194.56
BMW-4	217.1			190.26	184.71	184.01	193.71	187.81	196.47	188.69	188.37
RW-1	213.5					159.53	171.53	164.70	170.03	162.49	161.13
RW-2	214.1					160.49	167.49	161.74	165.14	161.81	161.73
RW-3	214.5					163.49	169.49	165.53	168.68	164.40	165.56
OW-1	-	164.34	165.14	157.04	*	154.84	165.54	159.21	164.99	156.90	156.99
OW-2	216.5	*	*	*	*	154.10	164.20	158.72	163.96	156.10	156.20
PW-1	214.4	*	*	*	*	*	*	159.5	164.5	157.0	157.0
PW-2	219.7	*	*	*	*	*	*	158.5	164.3	156.5	156.5

1. Elevations in feet above mean sea level.
2. PW-1, PW-2, OW-1 & OW-2 are deep Production & Observation wells in the Ocala aquifer; MW-1-1, MW-1-3, MW-1-5, MW-1-6, RW-1, RW-2, and RW-3 are monitoring wells considered to be in the upper Ocala. All others in residuum.
3. "*" means well not accessible for measurement on the date.
4. Blank space means well not installed at the time.
5. [168.6] = DRY WELL, shows well bottom elevation.

TABLE 2. SUMMARY OF GROUNDWATER ELEVATIONS BY FORMATION FIRESTONE - ALBANY, GEORGIA

SOIL (RESIDUUM) MONITORING WELLS

Well No.	02/17/86	03/24/86	05/27/86	09/19/86	10/15/86	05/04/87	01/19/88	04/20/88	07/27/88	10/26/88
MW-1-2			188.95	187.55	186.00	192.75	201.24	200.24	189.85	189.60
MW-1-4			188.25	183.60	182.60	193.90	188.56	194.28	189.72	189.96
MW-7-8			185.44	187.59	185.54	190.94	195.41	195.49	188.18	193.39
MW-12-1	201.13	198.93	196.68	197.08	197.18	197.63	200.97	200.88	198.30	198.28
BMW-2	205.51	205.36	204.06	203.11	202.71	205.41	206.10	208.19	206.11	206.01
BMW-3	200.94	195.74	185.99	186.09	189.44	194.44	197.39	198.73	193.14	194.56
BMW-4			190.26	184.71	184.01	193.71	187.81	196.47	188.69	188.37

UPPER OCALA MONITORING WELLS

Well No.	02/17/86	03/24/86	05/27/86	09/19/86	10/15/86	05/04/87	01/19/88	04/20/88	07/27/88	10/26/88
MW-1-1	168.24	167.79	162.69	159.89	159.69	169.49	162.14	163.59	163.11	162.19
MW-1-3			167.80	163.40	162.90	173.10	165.24	169.77	167.00	165.66
MW-1-5			160.42	159.47	159.37	168.47	160.22	166.07	161.28	160.13
MW-1-6					[155.5]	176.91	167.34	173.78	170.81	170.76
RW-1					159.53	171.53	164.70	170.03	162.49	161.13
RW-2					160.49	167.49	161.74	165.14	161.81	161.73
RW-3					163.49	169.49	165.53	168.68	164.40	165.56

DEEP OCALA PRODUCTION AND OBSERVATION WELLS

Well No.	02/17/86	03/24/86	05/27/86	09/19/86	10/15/86	05/04/87	01/19/88	04/20/88	07/27/88	10/26/88
OW-1	164.34	165.14	157.04	*	154.84	165.54	159.21	164.99	156.90	156.99
OW-2	*	*	*	*	154.10	164.20	158.72	163.96	156.10	156.20
PW-1	*	*	*	*	*	*	159.5	164.5	157.0	157.0
PW-2	*	*	*	*	*	*	158.5	164.3	156.5	156.5

1. Elevations in feet above mean sea level.
2. "*" means well not accessible for measurement on the date.
3. Blank space means well not installed at the time.
4. [168.6] = DRY WELL, shows well bottom elevation.

albgwel

TABLE 3. SUMMARY OF ANALYTICAL RESULTS - SOIL (RESIDUUM) MONITORING WELLS
FIRESTONE - ALBANY, GEORGIA

	MW-1-2						MW-1-4						MW-7-8				
	05/30/86	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88	05/30/86	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88
Benzene	•	•	•	•	•	0.007 +	•	•	•	•	•	•	•	•	•	•	•
1,1-DCA	•	•	•	•	•	•	0.003	0.002	0.003	•	0.002	0.001	•	•	•	•	•
1,1-DCE	•	•	•	•	0.002	0.002	0.194 +	0.205 +	0.059 +	0.085 +	0.076 +	0.054 +	•	•	•	•	•
Ethylbenzene	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
1,1,1-TCA	•	•	•	•	0.001	0.002	0.008	0.007	0.006	•	0.002	0.001	•	•	•	•	•
TCE	•	•	•	•	•	•	•	0.001	•	•	•	•	•	•	•	•	•
Toluene	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Xylenes	•		•	•	•	•	•		•	•	•	•		•	•	•	•

	MW-12-1								BMW-2							
	02/18/86	03/25/86	05/30/86	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88	02/18/86	03/25/86	05/30/86	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88
Benzene	•	•	•	•	•	•	•	0.007 +	•	•	•	•	•	•	•	•
1,1-DCA	0.007	0.015	0.007	0.004	0.069	0.115	0.142	0.088	•	•	•	•	•	•	•	•
1,1-DCE	0.002	0.003	0.001	0.001	0.013 +	0.017 +	0.017 +	0.015 +	•	•	•	•	•	•	•	•
Ethylbenzene	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
1,1,1-TCA	0.012	0.025	0.004	0.006	0.304 +	0.290 +	0.229 +	0.130	•	•	•	•	•	•	•	•
TCE	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Toluene	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Xylenes	•	•	•		•	•	•	•	•	•	•		•	•	•	•
Methylene Cl	•	•	•	•	•	0.016	•	•	•	•	•	•	•	•	•	•

	BMW-3								BMW-4					
	02/18/86	03/25/86	05/30/86	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88	05/30/86	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88
Benzene	•	•	•	•	•	•	•	•	•	•	•	•	•	•
1,1-DCA	0.018	0.023	0.018	0.016	0.023	0.023	0.033	0.027	•	•	•	•	•	•
1,1-DCE	0.002	0.002	0.001	0.001	0.003	•	0.003	0.002	•	•	•	•	•	•
Ethylbenzene	•	•	•	•	•	•	•	•	•	•	•	•	•	•
1,1,1-TCA	0.001	0.002	0.001	0.001	•	•	•	0.001	•	•	•	•	•	•
TCE	0.001	•	•	•	•	•	•	•	•	•	•	•	•	•
Toluene	•	•	•	•	0.003	•	•	•	•	•	•	•	•	•
Xylenes	•	•	•		0.003	•	•	•	•		•	•	•	•

NOTES: 1. Results expressed in mg/l (ppm)
2. Organic compounds shown only if detected in at least one sample
3. + denotes exceeds established Final MCL - Refer to Table 6
4. ^ denotes exceeds Proposed MCL
5. • denotes less than method detection limit
6. Blank space denotes not analyzed

alkemsum

TABLE 4. SUMMARY OF ANALYTICAL RESULTS - UPPER OCALA MONITORING WELLS
FIRESTONE - ALBANY, GEORGIA

	MW-1-1								MW-1-3					
	02/18/86	03/25/86	05/30/86	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88	05/30/86	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88
Benzene	0.199 +	0.315 +	0.030 +	*	*	*	0.082 +	0.053 +	*	*	*	*	*	*
1,1-DCA	*	0.002	0.002	0.002	*	*	0.006	0.006	0.006	0.020	*	0.078	0.139	0.150
1,1-DCE	0.032 +	0.033 +	0.018 +	0.013 +	*	*	0.018 +	0.019 +	0.073 +	0.115 +	*	0.350 +	0.611 +	0.530 +
Ethylbenzene	0.327	0.421	0.007	*	*	0.188	*	0.020	*	*	*	*	*	*
1,1,1-TCA	0.042	0.047	0.017	0.001	*	*	0.005	0.006	0.136	0.172	*	0.340 +	0.391 +	0.340 +
TCE	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Toluene	0.135	0.154	0.047	*	*	0.042	0.013	0.016	*	*	*	*	*	*
Xylenes	1.871 ^	2.300 ^	0.035		*	0.684 ^	0.112	*	*		*	*	*	*
T-1,2-DCE	*	*	*	*	*	*	*	*	*	*	*	*	*	*

	MW-1-5						MW-1-6			
	05/30/86	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88	01/21/88	04/21/88	07/27/88	10/27/88
Benzene	*	*	*	*	*	*	*	*	*	*
1,1-DCA	0.039	0.040	*	0.019	0.026	0.021	*	*	*	*
1,1-DCE	0.015 +	0.014 +	*	0.007 +	0.009 +	0.008 +	*	*	*	*
Ethylbenzene	*	*	*	*	*	*	*	*	*	*
1,1,1-TCA	0.006	0.004	*	*	0.001	0.001	*	*	*	*
TCE	0.002	0.002	*	*	0.002	0.001	*	*	*	*
Toluene	*	*	*	*	*	*	*	*	*	*
Xylenes	*		*	*	*	*	*	*	*	*
T-1,2-DCE	*	0.002	*	*	*	*	*	*	*	*

	RW-1					RW-2					RW-3				
	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88
Benzene	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1,1-DCA	*	*	*	*	*	0.001	0.003	0.002	0.001	0.001	0.004	0.002	0.002	0.002	0.001
1,1-DCE	*	*	*	*	*	0.001	*	*	*	*	*	*	*	*	*
Ethylbenzene	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1,1,1-TCA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
TCE	*	*	*	*	*	0.002	*	*	*	*	*	*	*	*	*
Toluene	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Xylenes		*	*	*	*		*	*	*	*		*	*	*	*
T-1,2-DCE	*	*	*	*	*	0.001	*	*	*	*	*	*	*	*	*

NOTES:
1. Results expressed in mg/l (ppm)
2. Organic compounds shown only if detected in at least one sample
3. + denotes exceeds established Final MCL - Refer to Table 6
4. ^ denotes exceeds Proposed MCL
5. * denotes less than method detection limit

TABLE 5. SUMMARY OF ANALYTICAL RESULTS - DEEP OCALA WELLS
FIRESTONE - ALBANY, GA

	PW-1							
	02/18/86	03/25/86	05/30/86	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88
Volatiles	*	*	*	*	*	*	*	*

	OW-1							
	02/18/86	03/25/86	05/30/86	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88
Volatiles	*	*	*	*	*	*	*	*

	PW-2							
	02/18/86	03/25/86	05/30/86	10/16/86	01/21/88	04/21/88	07/27/88	10/27/88
Volatiles	*	*	*	*	*	*	*	*

				OW-2				
				10/16/86	01/21/88	04/21/88	07/27/88	10/27/88
Volatiles				*	*	*	*	*

NOTES:
1. Results expressed as mg/l (ppm)
2. Organic compounds shown only if detected in at least one sample
3. + *denotes exceeds established Final MCL - Refer to Table 6*
4. ^ denotes exceeds Proposed MCL
5. * denotes less than method detection limit
6. Blank space denotes not analyzed

TABLE 6. Limits/Guidelines for Organic Compound Concentrations in Water

Final MCL's (mg/l; ppm)		Proposed MCL's (mg/l; ppm)	
Benzene	0.005	1,1-DCA	N.E.
1,1-DCA	N.E.	Ethylbenzene	0.680
1,1-DCE	0.007	Methylene Chloride	N.E.
Methylene Chloride	N.E.	Toluene	2.000
1,1,1-TCA	0.200	Trans-1,2-DCE	0.070
TCE	0.005	Xylenes	0.440

MCL = Maximum Contaminant Level for drinking water

N.E. = None Established

AQUA TECH ENVIRONMENTAL CONSULTANTS, INC.

P.O. Box 76
Melmore, Ohio 44845
(419) 397-2659

DEC 19 88

Client: WOODWARD CLYDE CONSULTANTS	
Address: 32111 AURORA ROAD SOLON, OH 44139 ATTN: VYDAS BRIZGYS	
Project No: 88C6059/FTR-ALBANY	Date(s) of Receipt at Laboratory: 10/28/88
Purchase Order:	
Comments:	

Sample Inventory

Atec No.	Client No.	Method(s)
SEE ATTACHED CHAIN OF CUSTODY		

Comments:

Authorized Signature: Robert S. Skowronski /KS

Title: Melmore Laboratory Manager
Date Released: DECEMBER 12, 1988

Woodward Clyde Consultants
Project #88C6059-01/FTR-ALBANY
Volatile Fraction
Method #8010, 8020
Date Received: 10/28/88

ATEC Sample No.	18161	18162	18163	18164	18165
Client Sample No. ALB-	PW-1	OW-1	PW-2	PW-3	BMW-4
Analyst	LLR	LLR	LLR	LLR	LLR
Date Analyzed:	11/01/88	11/01/88	11/01/88	11/01/88	11/01/88
Benzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloroethyl Vinyl Ether	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorobromomethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1 Dichloroethane	< 0.5	1.3*	< 0.5	< 0.5	< 0.5
1 Dichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene	< 0.5	< 0.5	< 0.5	*2.4	< 0.5
1,2-Dichloropropane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethyl Benzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Bromide	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Chloride	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methylene Chloride	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane	< 0.5	< 0.5	< 0.5	**0.8	< 0.5
1,1,2-Trichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

All results reported as ug/l.

* Confirmed Lab Error: ND in re-runs - RSG 1/18/89
** Confirmed Lab Error: ND in split, ND in re-runs - RSG 1/18/89

Woodward Clyde Consultants
Project #88C6059-01/FTR-ALBANY
Volatile Fraction
Method #8010, 8020
Date Received: 10/28/88

ATEC Sample No.	18166	18167	18168	18169	18170
Client Sample No. ALB-	OW-2	BMW-3	BMW-2	MW-8-1	MW-12-1
Analyst	LLR	LLR	LLR	LLR	LLR
Date Analyzed	11/01/88	11/01/88	11/01/88	11/01/88	11/01/88
Benzene	< 1.0	< 1.0	< 1.0	< 1.0	6.6
Bromoform	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	< 1.0	< 1.0	< 1.0	< 1.0	16.4
2-Chloroethyl Vinyl Ether	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	< 0.5	< 0.5	< 0.5	4.9	< 0.5
Dichlorobromomethane	< 0.5	< 0.5	< 0.5	0.7	< 0.5
chlorodifluoromethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1-Dichloroethane	< 0.5	26.5	< 0.5	< 0.5	88.1
1,2-Dichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene	< 0.5	2.4	< 0.5	< 0.5	14.9
1,2-Dichloropropane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethyl Benzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Bromide	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Chloride	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methylene Chloride	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	< 0.5	< 0.5	< 0.5	0.6	< 0.5
Toluene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane	< 0.5	0.9	< 0.5	< 0.5	130
1,1,2-Trichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

All results reported as ug/l.

Woodward Clyde Consultants
Project #88C6059-01/FTR-ALBANY
Volatile Fraction
Method #8010, 8020
Date Received: 10/28/88

ATEC Sample No.	18171	18172	18173	18174	18175
Client Sample No.	RW-1	RW-2	RW-3	MW-1-6	MW-7-8
Analyst	REB	REB	REB	REB	REB
Date Analyzed	11/02/88	11/02/88	11/02/88	11/02/88	11/02/88
Benzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloroethyl Vinyl Ether	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	< 0.5	< 0.5	0.6	< 0.5	< 0.5
Dichlorobromomethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	< 0.5	0.8	0.8	< 0.5	< 0.5
1,2-Dichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	0.9
1,2-Dichloropropane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethyl Benzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Bromide	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Chloride	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methylene Chloride	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

All results reported as ug/l.

Woodward Clyde Consultants
Project #88C6059-01/FTR-ALBANY
Volatile Fraction
Method #8010, 8020
Date Received: 10/28/88

ATEC Sample No.	18176	18177	18178	18179	18180
Client Sample No. ALB-	MW-1-2	MW-1-1	MW-8-3	MW-1-3	MW-1-5
Analyst	REB	REB	REB	REB	REB
Date Analyzed	11/02/88	11/02/88	11/02/88	11/02/88	11/02/8
Benzene	6.5	53.0	< 1.0	< 1.0	< 1.0
Bromoform	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chloroethyl Vinyl Ether	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	< 0.5	< 0.5	9.9	< 0.5	< 0.5
Dichlorobromomethane	< 0.5	< 0.5	1.7	< 0.5	< 0.5
Dichlorodifluoromethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	< 0.5	6.2	< 0.5	150	20.9
1,2-Dichloroethane	< 0.5	< 0.5	< 0.5	1.1	< 0.5
1,1-Dichloroethene	1.7	18.8	< 0.5	530	7.8
1,2-Dichloropropane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethyl Benzene	< 1.0	19.8	< 1.0	< 1.0	< 1.0
Methyl Bromide	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Chloride	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methylene Chloride	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	< 0.5	< 0.5	< 0.5	1.1	< 0.5
Toluene	< 1.0	15.7	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane	2.4	6.2	< 0.5	340	1.4
1,1,2-Trichloroethane	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	< 0.5	< 0.5	< 0.5	< 0.5	1.2
Trichlorofluoromethane	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

All results reported as ug/l.

Woodward Clyde Consultants
Project #88C6059-01/FTR-ALBANY
Volatile Fraction
Method #8010, 8020
Date Received: 10/28/88

ATEC Sample No.	18181	18182
Client Sample No. ALB-	MW-1-4	MW-8-2
Analyst	REB	REB
Date Analyzed	8/09/88	8/09/88
Benzene	< 1.0	< 1.0
Bromoform	< 1.0	< 1.0
Carbon Tetrachloride	< 0.5	< 0.5
Chlorobenzene	< 1.0	< 1.0
Chlorodibromomethane	< 0.5	< 0.5
Chloroethane	< 1.0	< 1.0
2-Chloroethyl Vinyl Ether	< 1.0	< 1.0
Chloroform	< 0.5	< 0.5
Dichlorobromomethane	< 0.5	< 0.5
Dichlorodifluoromethane	< 1.0	< 1.0
1-Dichloroethane	0.8	1.0
2-Dichloroethane	< 0.5	< 0.5
1,1-Dichloroethene	54.4	57.3
1,2-Dichloropropane	< 0.5	< 0.5
cis-1,3-Dichloropropene	< 0.5	< 0.5
trans-1,3-Dichloropropene	< 0.5	< 0.5
Ethyl Benzene	< 1.0	< 1.0
Methyl Bromide	< 1.0	< 1.0
Methyl Chloride	< 1.0	< 1.0
Methylene Chloride	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5	< 0.5
Tetrachloroethene	< 0.5	< 0.5
Toluene	< 1.0	< 1.0
trans-1,2-Dichloroethene	< 0.5	< 0.5
1,1,1-Trichloroethane	1.4	1.3
1,1,2-Trichloroethane	< 0.5	< 0.5
Trichloroethene	< 0.5	< 0.5
Trichlorofluoromethane	< 1.0	< 1.0
Vinyl Chloride	< 1.0	< 1.0
Total Xylenes	< 2.0	< 2.0

All results reported as ug/l.

NPL-47-3-L77-R4

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April 28, 1989

WRITER'S DIRECT LINE:

(312) 368-7283

VIA FEDERAL EXPRESS

Mr. Stephen Lingle
Director, Hazardous Site Evaluation Division
(ATTN: NPL STAFF)
Office of Emergency and Remedial Response (W11-548A)
U.S. Environmental Protection Agency
401 M. Street S.W.
Washington, D.C. 20160

Re: Beaunit Corp. (Circular Knit and Dyeing Plant)
Fountain Inn, South Carolina
Second Comment

Dear Mr. Lingle:

Wilson Sporting Goods (Wilson) herewith submits its second set of comments on U.S. EPA's June 24, 1988 proposal to add the Beaunit Corp. site, Fountain Inn, South Carolina, to the National Priorities List (NPL).

By letter dated August 23, 1988, Wilson, through its counsel, Rainey, Britton, Gibbes & Clarkson, submitted information developed by RMT, an independent engineering consultant, to show that the appropriate HRS score for the Beaunit site is 20.58, not the 32.44 calculated by U.S. EPA.

As part of its effort to develop a response plan for the Beaunit site, Wilson retained ENSR Consulting and Engineering (formerly ERT, a nationally recognized environmental consulting firm whose credentials are attached) to review U.S. EPA's scoring and RMT's rescoring. ENSR's recalculation of the HRS score results in a value of 24.42, which is midway between U.S. EPA's 32.44 and RMT's 20.58 and which is below the 28.5 regulatory cutoff score for adding sites to the NPL. (See attachment.)

The difference between ENSR's and U.S. EPA's scores relates solely to three factors: (1) hazardous waste quantity, (2) distance to nearest well/population served, and (3) accessibility. ENSR's scores for the second and third factors are based on verifiable fact. Only the first factor, quantity of hazardous waste, is subject to interpretation. Even if ENSR accepts U.S. EPA's score for the first factor, the revised HRS score would be 26.54, which is still below 28.5.

Wilson strongly objects to U.S. EPA's proposed addition of the Beaunit site to the NPL. Based on independent investigations by two reputable, competent, and independent consulting firms, both of whom found that an appropriate HRS score for the site is below the NPL cutoff, Wilson believes it would be unreasonable for U.S. EPA to add the Beaunit site to the NPL.

5/1

Wilson acknowledges that the site requires appropriate response, even if it is not added to the NPL, and to that end respectfully requests an informal conference with U.S. EPA to discuss a response plan.

Very truly yours,

RUDNICK & WOLFE

Johnine J. Brown

JJB/bfa

Enclosures

cc: Mr. Scott Gardner
U.S. Environmental Protection Agency
Region IV
345 Courtland Street
Atlanta, Georgia 30365

Mr. Wilson C. Miles, Jr.
Division of Site Engineering
and Response Activities
Bureau of Solid and Hazardous
Waste Management
S.C. Department of Health and
Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

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ENSR

Formerly ERT

ENSR Consulting
and Engineering
35 Nagog Park
Acton, MA 01720
(508) 635-9500

ENSR Document No. 5805-011-100
ENSR Reference No. 56-RFH-532

April 28, 1989

Johnine J. Brown, Esquire
Rudnick & Wolfe
203 North LaSalle Street
Chicago, Ill 60601

RE: Beaunit Corp. (Circular Knit and Dyeing Plant)
Fountain Inn, South Carolina

Dear Johnine:

This letter summarizes ENSR Consulting & Engineering's (ENSR's) site visit and HRS rescoring of the above referenced site.

Site Visit/File Review

On Thursday, April 20, 1989, Mark Haney and Roberta Haney inspected the abandoned lagoon formerly operated by Beaunit and reviewed pertinent Wilson Sporting Goods facility files. On Friday, April 21, the South Carolina Department of Health and Environmental Control (SCDHEC) files were reviewed. The following summarizes the results of our investigation:

Site Visit

- A six-foot high security fence topped with barbed wire completely surrounds the abandoned lagoon area. The gate was locked and secure.
- The present open lagoon area is approximately 70 feet in diameter and is covered by an unknown depth of ponded water.
- A soil berm has been constructed adjacent to the ponded area by Wilson to prevent runon into the pond.

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HRS Rescoring

ENSR has reviewed the August 23, 1988 correspondence from Heyward Clarkson, III, Rainey, Britton, Gibbes & Clarkson, P.A. to the U.S. Environmental Protection Agency (EPA) which documents a recalculated HRS score. In addition, ENSR has independently reviewed Wilson Sporting Goods' Fountain Inn facility files; materials provided by RMT, Inc., including site-specific permeability data and descriptions of the Beaunit lagoon corings; documentation assembled by R,B,G & C from the South Carolina Department of Health and Environmental Control and the South Carolina Water Resources Commission as well as the results of a local survey of potential groundwater users; and all South Carolina Department of Health and Environmental Control files made available to us during an April 21, 1989 file inspection. Using the above sources of information, combined with our site inspection of April 20, 1989, ENSR has prepared a revised HRS score. The following summarizes our comments and results of our rescoring effort. To facilitate a comparison, the associated HRS scores by line item prepared by RMT and USEPA also are provided.

GROUND WATER SCORING SHEET

1. Observed Release (RMT score 0, ENSR score 0, USEPA score 0)

No change

2. Route Characteristics

Depth to Aquifer (RMT - 3, ENSR - 3, USEPA - 3)

ENSR concurs with EPA's score of 3 for this category. Based on ground-water elevations observed in newly constructed monitoring wells at the former Beaunit facility, ground-water elevations are approximately 20 tc 25 feet below ground surface. Due to the proximity of the abandoned lagoon to the creek, it is likely that the ground water is shallower in this area. The wastewater treatment facility drawings indicated that the lagoon was excavated approximately 10-12 feet. Thus, it is likely that the depth to ground water from the lowest sludge elevation is within 0 - 20 feet, which would receive a score of 3.

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Net Precipitation (RMT - 2, ENSR - 2, USEPA - 2)

No Change

Permeability of Unsaturated Zone (RMT - 1, ENSR - 2, USEPA - 2)

EPA utilized a permeability value of 10-3 to 10-5 cm/sec based on a USDA soil survey. Rainey, Britton, Gibbes & Clarkson utilized the results of a Falling Head Permeability Test performed by Froehling & Robertson on August 2, 1988 which indicated that the permeability was approximately 1.84 x 10-6 cm/sec.

An August 8, 1988 correspondence from Donald Sipher, P.E. and C. J. Smith, Froehling & Robertson, Inc. to Mr. Robb Porter, also of Froehling & Robertson, Inc. indicates that the permeability test was performed on a soil sample obtained using a Shelby Tube from a depth of 4.0 to 6.0 feet. An RMT interoffice memo from Jim McElduff to Hayward Clarkson, Rainey, Britton, Gibbes & Clarkson, indicates that the sample was obtained from a location approximately 25-feet north of the north end of the levee.

ENSR cannot independently conclude that the results of a sample collected from a depth of 4 to 6 feet below ground surface near the impoundment is representative of the permeability of geologic materials underlying the lagoon, the base of which is approximately 10-12 feet below ground surface. Therefore, ENSR has recalculated the score on a worst case basis assuming a permeability value of 10-3 to 10-5 cm/sec.

Physical State (RMT - 3, ENSR - 3, USEPA - 3)

No change

3. Containment (RMT - 3, ENSR - 3, USEPA - 3)

No Change

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4. Waste Characteristics

Toxicity/Persistence (RMT - 18, ENSR - 18, USEPA - 18)

No Change

Hazardous Waste Quantity (RMT - 3, ENSR - 5, USEPA - 7)

EPA estimated that the sludge thickness was 6 feet, based on the results of a composite sample obtained from 1 to 6 feet. The hazardous waste quantity was calculated using a 35 foot radius and a depth of 10 feet, which included 4 feet of ponded water.

Rainey, Britton, Gibbes & Clarkson utilized recent measurements of the lagoon taken by RMT, Inc. which consisted of visual inspection of five core samples taken throughout the ponded area. The inspection indicated the cores consisted of an approximate 4 to 6-inch layer of brown mudlike sludge above a bluish gray micaceous schist. Furthermore, in accordance with 40 CFR Part 300, Appendix A, Section 3.4, the hazardous waste quantity recalculation did not include the 4 feet of ponded water.

ENSR reviewed EPA's limited notes regarding their sampling method used to collect the lagoon sludge/soil sample. As stated above, the sludge thickness of 6 feet was based on a composite sample obtained from a depth of 1 to 6 feet. Compositing a sample over such a large interval will most likely result in an overestimation of the depth of sludge than actually exists. Furthermore, documentation of this sampling effort is poor. An April 24, 1989 telephone conversation with Wilson Miles, SCDHEC, indicates that is unclear whether the entire interval was sludge or a mixture of sludge and soil. The incorporation of ponded water into the HRS hazardous waste quantity calculation is also incorrect. Thus, ENSR used a depth of 6 inches to recalculate the score. The drawings for the proposed wastewater treatment facility expansion indicate that the actual size of the lagoon was most likely 19,832 square feet, not 3,850 square feet utilized by EPA and Rainey, Britton, Gibbes & Clarkson.

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ENSR's recalculated hazardous waste quantity, utilizing the area of 19,832 square feet and a depth of 6 inches, is 367 cubic yards, yielding a revised score of 5.

5. Targets

ENSR utilized the information obtained by Rainey, Britton, Gibbes & Clarkson to recalculate the HR$ score.

Ground Water Use (RMT - 3, ENSR - 3, USEPA - 3)

No change

Distance to Nearest Well/Population Served (RMT - 18, ENSR - 18, USEPA - 24)

Records searches of South Carolina Department of Health and Environmental Control and Water Resources Commission files indicate that the well nearest to the Beaunit facility is 1.2 miles away, rather than 0.7 as indicated in USEPA's scoring. In addition, it has been confirmed by R,B,G & C through field reconnaissance that public water is available to all buildings within a one mile radius of the Beaunit lagoon. All previously existing wells within one mile have been abandoned such that no private wells now exist within that radius.

SURFACE WATER SCORING SHEET

No Change (Not scored by RMT, ENSR or USEPA)

AIR SCORING SHEET

No Change (Not scored by RMT, ENSR or USEPA)

ENSR's recalculated score for the ground-water pathway is 42.24. This results in a final HRS score of 24.42. It should be noted that even if the score is recalculated using EPA's assumed permeability number and hazardous waste quantity but revising only the target numerical value based on the data obtained by Rainey, Britton, Gibbes & Clarkson, the ultimate score is 26.5, still well under the 28.5 cutoff.

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DIRECT CONTACT SCORING SHEET

1. Observed Incident (RMT - 0, ENSR - 0, USEPA - 0)

   No Change

2. Accessibility (RMT - 0, ENSR - 0, USEPA - 3)

   The EPA gave an assigned value of 3 to this factor due to a missing section of the fence surrounding the lagoon. ENSR found the site to be completely fenced and secure. Thus, ENSR agrees that the assigned value for accessibility should be 0, thereby reducing the S(dc) score to 0 (not 12.5 as stated in Rainey, Britton, Gibbes & Clarkson's August 23, 1988 correspondence).

3. Containment (RMT - 15, ENSR - 15, USEPA -15)

   No Change

4. Waste Characteristics (RMT - 3, ENSR - 3, USEPA - 3)

   No Change

5. Targets

   Population Within 1-Mile Radius (RMT - 3, ENSR - 3, USEPA - 3)

   No Change

   Distance to a Critical Habitat (RMT - 0, ENSR - 0, USEPA - 0)

   No Change

Conclusion

ENSR has recalculated the Beaunit lagoon HRS score based upon information obtained from available regulatory agency files, an area reconnaissance performed by Rainey, Britton, Gibbes & Clarkson, P.A., and an April 20, 1989 ENSR inspection of the site. ENSR's recalculated score is 24.42, which is lower than

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USEPA's 32.44 but higher than RMT's 20.58. In addition, ENSR recalculated the Direct Contact score based upon the current status of the site. Indicative of the site's low priority, the revised Direct Contact score is 0.

Differences in scoring relative to ENSR and USEPA relate solely to three factors: (i) the determination of hazardous waste quantity, (ii) distance to the nearest well/population served, and (iii) accessibility. ENSR's assigned scores for the latter two factors are based on verifiable fact; only the first appears to be subject to interpretation. Even accepting USEPA's opinion and scoring for the waste quantity estimate, the revised score would be 26.54 which is still below the 28.5 criterion for listing on the National Priorities List.

In summary, based on our independent review of file information and observation of the site, we have recalculated the Direct Contact and HRS scores to be 0 and 24.42, respectively. Both of these suggest that the site should not be listed on the NPL. Should you have any questions concerning our site visit, file review or HRS rescoring, please do not hesitate to contact either of the undersigned. We will forward a copy of all file material copied during the site visit to you for your information.

Sincerely,

Roberta F. Haney by MAH

Roberta Fine Haney, P.E.
Senior Environmental Engineer

Mark A. Haney
Senior Program Manager

RFH/MAH/lw

Enclosures

ROBERTA FINE HANEY

PROFESSIONAL HISTORY

FNSR Consulting and Engineering
ERSECO, Inc.
CH_2M Hill, Inc.

EDUCATION

M.S. (Civil and Environmental Engineering) University of Wisconsin-Madison
B.S. (Civil Engineering) Norwich University

AFFILIATIONS

Tau Beta Pi - National Engineering Honor Society
Chi Epsilon - National Civil Engineering Honor Society

PROFESSIONAL REGISTRATION

Registered Professional Engineer (Rhode Island)

TECHNICAL SPECIALTIES

9 years of experience in:

- Remedial Investigations/Feasibility Studies
- Active and Inactive Hazardous Waste Sites

REPRESENTATIVE PROJECT EXPERIENCE

Inactive Site Investigations

- Wood Treating Site. Project manager for the preparation of a feasibility study for a wood treating site. The site involved soil and ground water contaminated with PAH, PCP and chlorinated dibenzo-p-dioxins (soil only). Feasibility study was conducted in accordance with CERCLA and SARA. Evaluated and recommended an expedited response action for the removal of nonaqueous phase liquid from the ground water.

- Wood Treating Superfund Site. Project manager for the preparation of a feasibility study for a wood treating site involving soil and ground water contaminated with PCP. Feasibility study conducted in accordance with CERCLA and SARA.

- PRP Committee, Waste Site. Project manager for the review and evaluation of an EPA-generated remedial investigation/feasibility study for an industrial waste lagoon. Advised the PRP committee on nature and extent of site concerns and potential remedial actions.

- Chemical Manufacturing Superfund Site. Manager for the preparation of a feasibility study for a chemical manufacturing superfund site. The site involved numerous lagoons, landfills and a wetland area contaminated with metals, volatiles and industrial wastes. The feasibility study was conducted in accordance with CERCLA and SARA.

- Manufacturing Superfund Site. Managed the preparation of a feasibility study for a superfund site involving a municipal water supply contaminated by VOC as a result of manufacturing operations.

- Coal Gasification Plant. Project manager for remedial investigation/feasibility study at a 22-acre coal gasification plant. Site involved soil and ground water contaminated with PAH.

- Chemical Distributing Plant. Managed the development of an expedited response action and preparation of a feasibility study for a chemical distributing plant involving soil and ground water contaminated with VOC.

- Coal Gasification Site. Reviewed feasibility study of former coal gasification site for potential land buyer. Advised client on nature and extent of site concerns and recommended remedial measures.

- Superfund Site. Reviewed feasibility study developed for site involving soil and ground-water contamination and several decaying hide piles. Prepared a technical comments document that evaluated the remedial alternatives proposed in the study and developed alternative remedial measures for the site.

- Superfund Site. Project manager for private industrial party review of remedial investigation/feasibility study being conducted by an EPA contractor. The site involves a public water supply that has been contaminated by volatile organic compounds.

- Generator Committee, Superfund Site. Coordinated the review of an NPL Site Feasibility Study and Proposed Preferred Alternative document for a generator committee. The site involved soil and ground water contaminated by PCB and VOC. Prepared a technical review document for submission to EPA.

- Groveland Wells Superfund Site. Prepared feasibility study for restoration of an aquifer used for a municipal water supply that had become contaminated by various organic compounds. Numerous remedial alternatives were developed ranging from natural aquifer cleansing to recovery well and treatment strategies. Alternatives were evaluated and initially screened with respect to adverse impacts and cost. A detailed evaluation of remaining alternatives involved computer modeling of each pumping scenario, development of detailed cost estimates, and evaluation of environmental and public health effects.

- Laskin Poplar Oil Company, Superfund Site. Site manager for remedial investigation at the Laskin Poplar Superfund Site. Responsible for preparation of multi-media sampling plan, on-site supervision of all remedial investigation activities including monitoring well installations, geophysical survey and extensive soil, water, sediment and biota sampling.

- Superfund Site Remedial Investigations. Member of remedial investigation sampling teams on numerous superfund sites. Investigations included air quality monitoring, sediment, soil and water sampling.

- Chemical Manufacturing Site. Prepared feasibility study for cleanup/closure of several hazardous waste disposal areas at designated Superfund site. Remedial alternatives were identified and evaluated using the National Contingency Plan (NCP) screening criteria and evaluation process. Participated in feasibility study for aquifer restoration. The study included evaluation of several recovery well strategies in conjunction with treatment processes to reduce volatile organic contamination.

- PCB-Contaminated River. Prepared feasibility study for privately financed cleanup of PCB-contaminated river. Remedial alternatives screened and evaluated included dredging, in situ impoundment, channelization and on-site disposal. Identified and reviewed applicable regulatory requirements for implementation of each alternative.

Hydrogeologic Studies

- Pulp and Paper Industry. Conducted hydrogeologic study at paper mill sludge landfill. This project included installation of monitoring wells and multi-media sampling. Nature and extent of ground water contamination were identified. Made recommendations for closure of site with continued ground water monitoring.

- Oil Spill, Private Water Company. Conducted ground water sampling program at private water company to determine the extent of contamination resulting from an oil spill in the vicinity of drinking water supply wells. Results of investigation indicated that emergency response measures had minimized aquifer contamination.

- Municipal Landfill. Evaluated the nature and extent of ground water contamination at a municipal landfill. Project involved computer modeling of ground-water monitoring data using multi-dimensional spline smoothing.

Sludge Disposal Study

- o Pulp and Paper Industry. Evaluated disposal alternatives for paper mill sludge. Study included the evaluation of permeability, degradation and chemical characteristics of the sludge with respect to its applicability as cover material for municipal landfills.

PUBLICATIONS

Shanahan, P., and R.J. Fine. 1987. "Trends in Superfund Response Actions." Presented at National APCA Meeting, June, New York, NY.

Goldman, L.M., and R.J. Fine. 1984. "Decision Making for Remedial Alternatives Using the Provisions of CERCLA: PCB River Cleanup and Industrial Site Cleanup/closure." Proc. of Management of Uncontrolled Hazardous Waste Sites Conference, November, Washington, D.C.

Anderson, D.L., R.J. Fine, and R.L. Siegrist. 1983. "Multi-dimensional Spline Smoothing as a Tool in Monitoring the Performance of Land Treatment Systems." Proc. of NWWA Conference on Characterization and Monitoring of the Vadose Zone, December, Las Vegas, NV.

MARK A. HANEY

PROFESSIONAL HISTORY

ENSR Consulting and Engineering
Illinois Environmental Protection Agency

EDUCATION

B.S. (Environmental Biology) Eastern Illinois University

AFFILIATIONS

Association of Ground Water Scientists and Engineers
Beta Beta Beta Biological Honor Society

TECHNICAL SPECIALTIES

9 years of experience in:

- RCRA Ground-water Monitoring Regulations and Policy
- RCRA Permits and Enforcement
- RCRA Corrective Action
- Regulatory Compliance/Enforcement Negotiations

REPRESENTATIVE PROJECT EXPERIENCE

- RCRA Corrective Action. Designed and developed work plan, including source characterization and ground-water monitoring strategies, for a large metals reclamation facility in accordance with a U.S. EPA RCRA enforcement order.

- Commercial Hazardous Waste Treatment and Disposal Facility - Ground-water Investigation. Senior Illinois EPA representative to the U.S. EPA National Ground-water Task Force investigation of a large commercial hazardous waste landfill and treatment facility in Illinois. Conducted in-depth review of site geology, hydrogeology, engineering design and operation to determine current regulatory status, potential for permitting and acceptability for disposal of CERCLA waste.

- Confidential Client - Coal Gasification Site. Project manager for site assessment of five former coal gas plant properties. Evaluated potential threat posed by each site, located in residential neighborhoods, worked with owners to prioritize remedial investigation activities, developed draft press release for company to use during site work activities.

- Reilly Tar & Chemical Corporation. Project manager for closure of hazardous was surface impoundment, waste pile and container storage areas. Developed closure plans, prepared permit applications and oversaw design and installation of a ground-water extraction and treatment system for control of VOCs and PAHs in ground-water on-site.

- Reilly Tar & Chemical Corporation. Project manager for closure of a hazardous waste pile, being conducted under both State and Federal regulations. Advised client in intermediate site cleanup programs and developed strategy for responding to Corrective Action provisions.

- Superfund Remedial Investigation. Project manager for remedial investigation (RI) at a large barrel reclamation facility. Wrote work plan, developed bid specifications, reviewed proposals, and managed first Superfund RI in Illinois.

- Commercial Hazardous Waste Disposal Facility - Ground-water Investigation. Senior Illinois EPA representative to the U.S. EPA National Ground-water Task Force investigation of a commercial hazardous waste landfill in Illinois. Conducted in-depth review of site geology, hydrogeology, engineering design and operation to determine current regulatory status, potential for permitting and acceptability for disposal of CERCLA waste.

- RCRA Regulatory Compliance Investigations. Conducted inspections at large industrial manufacturing operations, petroleum refineries, waste storage and treatment facilities and oil reclamation companies. Developed and directed enforcement strategies and plans for bringing facilities into compliance with regulatory requirements.

- Expert Witness - Ground-water Contamination Case. Developed and reviewed information relative to a State of Illinois lawsuit charging ground-water contamination by an inactive commercial hazardous waste landfill. Testified at hearings and made affadavits in a case which went before the Illinois Supreme Court on appeal.

ENVIRONMENTAL PROGRAM EXPERIENCE

- Manager, Hazardous and Solid Waste Regulatory Compliance Section - Engineering Division, ERT, Inc. Supervise engineers, hydrogeologists and regulatory compliance personnel in the development of facility enforcement strategies and design and implementation of site remedial investigations, RCRA corrective actions, Part B operating permit applications, RCRA Closure Plans and soil and ground-water remediation programs.

- Manager, Facilities Compliance Unit. Division of Land Pollution Control, Illinois Environmental Protection Agency. Supervised professional and technical ground-water and enforcement personnel; directed the Illinois RCRA ground-water program; coordinated state RCRA and underground injection control compliance efforts; and designed and implemented Illinois' RCRA enforcement reporting system. Past appointments include the Illinois EPA Professional Management Development System.

REGULATORY DEVELOPMENT AND POLICY EXPERIENCE

- Illinois Environmental Protection Agency - Division of Land Pollution Control. Developed technical justification for and wrote new and revised State of Illinois environmental regulations for non-hazardous waste disposal facilities. Primary focus of the effort was development of technical standards including construction criteria, media monitoring and operating requirements.

- U.S. Environmental Protection Agency - Office of Waste Programs Enforcement (OWPE). On assignment to OWPE as a member of the Hazardous Waste Ground-Water Monitoring Technical Enforcement Guidance Document (TEGD) Work Group, wrote, reviewed and revised the TEGD in conjunction with USEPA staff and support contractors.

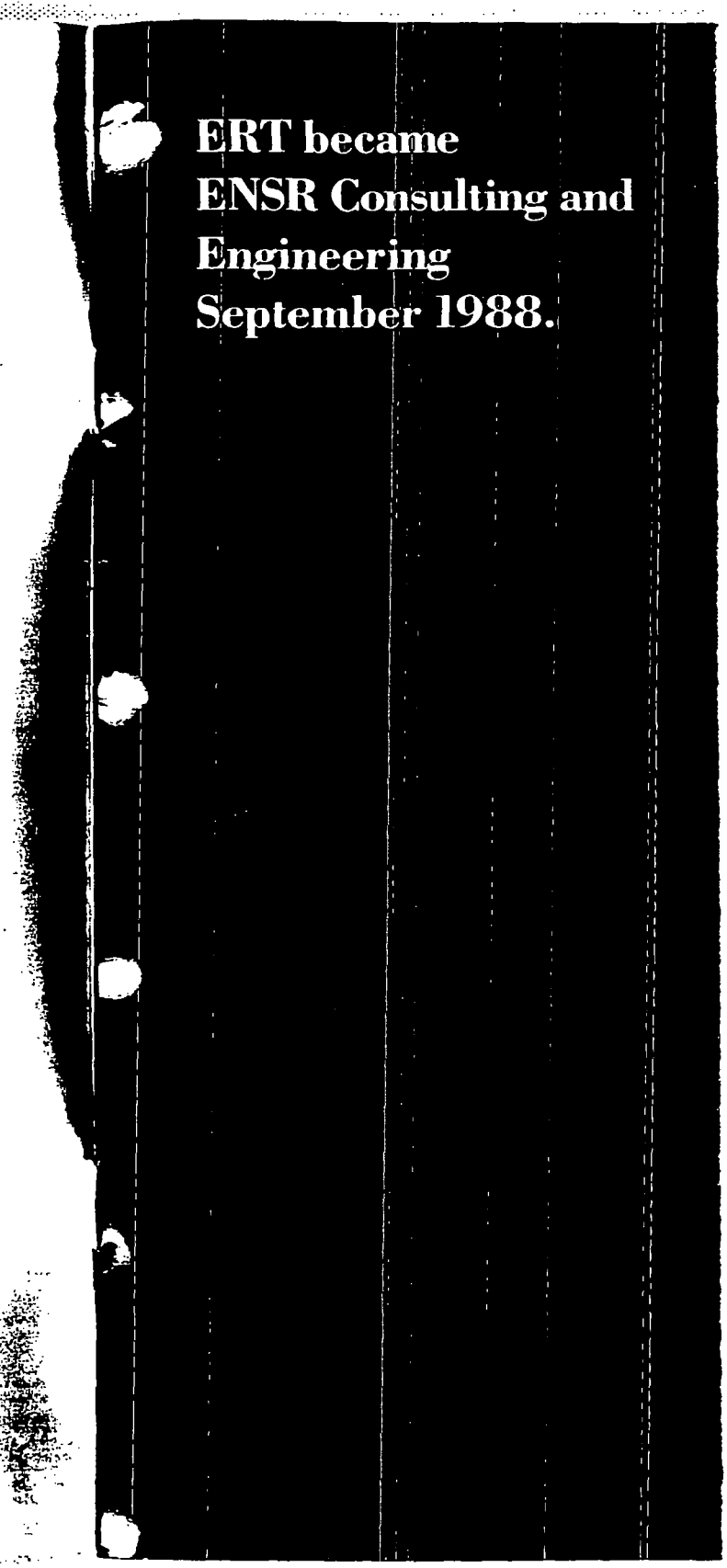
- Association of State and Territorial Solid Waste Management Officials (ASTSWMO). Served as Illinois EPA representative to the ASTSWMO Ground-Water Task Force, evaluating policy and guidance, commenting on USEPA draft guidance materials and recommending state positions to USEPA.

ENSR

ENSR Corporation
Environmental Services

The mission of ENSR Corporation is to be the leader in providing quality environmental services to assist our clients in meeting their environmental and health goals.

To implement this mission, we changed our name to ENSR Corporation (pronounced "N-sir") from Resource Engineering in March 1988. Derived from the words "environmental" and "services", the name ENSR emphasizes the growth and leadership we have already shown and which we will build.



We are pleased to announce that ERT changed its name to ENSR Consulting and Engineering in September 1988. We look forward to continuing to provide you the same high level of service you have known for the past 20 years. In addition, we are building for the future...

Now, as part of ENSR Corporation, we have the capability to provide both single specialized services and a full range of integrated environmental services. Our new services are in the areas of health science, waste management technology, construction management and field operations.

Please call Kathleen Reppucci at 1-800-722-2440 for more information on our services and plans for the future.

ENSR Corporation

Outstanding Specialized Expertise and Integrated Services

ENSR Corporation (pronounced "N-sir") is a leading national environmental services firm. We understand your need to manage a broad range of complex industrial environmental problems, liabilities and costs. To offer you unparalleled service, we have brought together companies with a long track record of outstanding expertise in:

- Consulting and Engineering
- Applied Technology
- Health Sciences
- Construction, and
- Field Operations

Their years of experience are now available for all your environmental needs from one source, ENSR.

Strong, Experienced, Project Management

Our project managers are experienced in taking projects from initial investigations through to construction and field operation. Our staff understands the differences in managing a single-discipline consulting job versus a large design-construct or field operations assignment. ENSR offers the best services for both situations. We can provide specialized technical expertise or an integrated team led by an experienced project manager. In either case, you have a single point of contact for managing your project.

Results You Can Depend On

Rely on ENSR for results. We know you need solutions that can stand up to the scrutiny of regulatory agencies, scientific and medical peers, or litigation. Our reputation has been built on winning permits in all 50 states, saving millions of dollars through the use of innovative technologies and providing indisputable medical data.

Fast Response, Coast-to-Coast Service

Many environmental problems or questions seem to create a need for fast response, often in many locations at the same time. We have an outstanding track record of quickly mobilizing project teams from our staff of over 1400 in 24 offices and 12 laboratories nationwide.

ENSR Consulting and Engineering

Twenty Years of Leadership

ENSR Consulting and Engineering (Formerly ERT) has earned national recognition for cost-effective solutions to environmental problems for industry based on over 8000 projects performed the last 20 years. These projects have served every major industry before all state jurisdictions and EPA regions and have included a number of the most controversial environmental problems of our times.

Effective Project Management, Backed By Staff In Over 50 Disciplines

We understand the importance you place on the selection of a manager for your project, large or small. Our project managers are practical yet innovative. Many have 10 to 20 years' experience as industrial managers prior to joining our consulting staff.

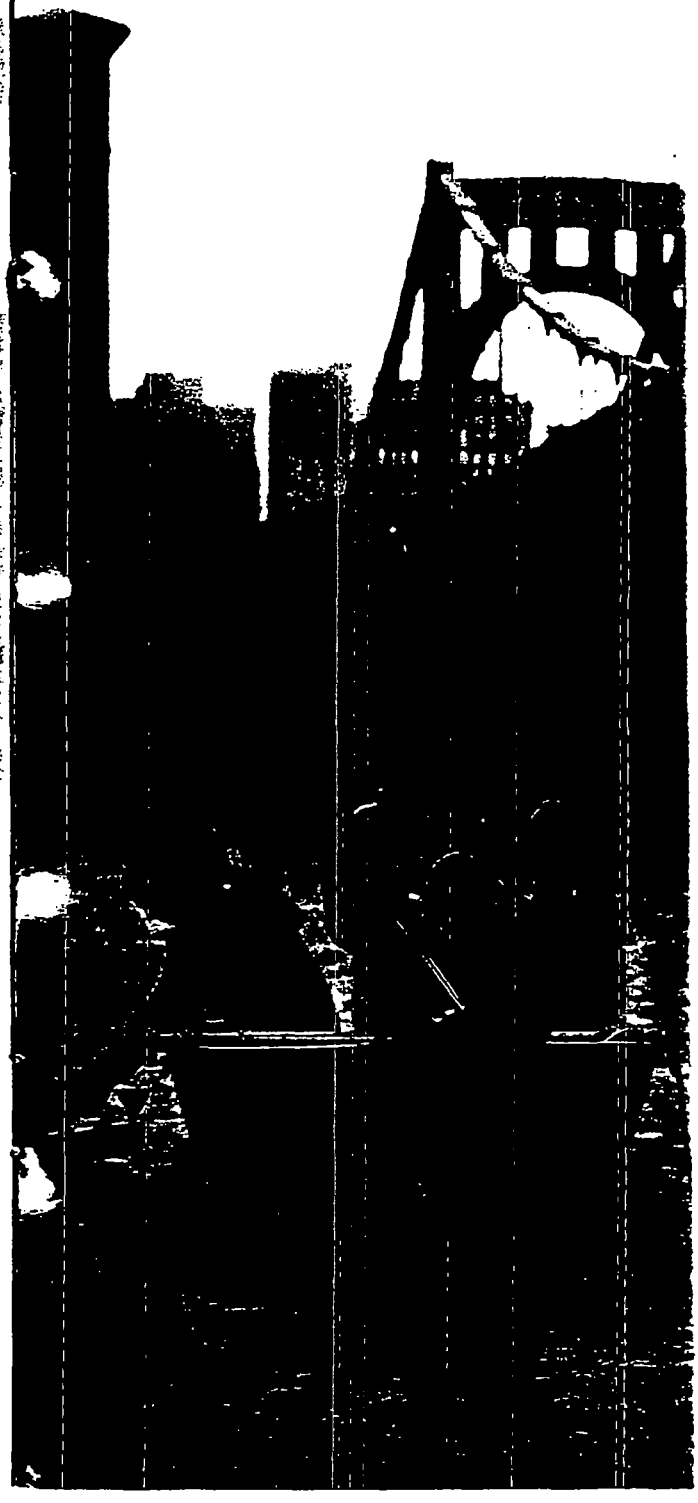
On hazardous waste projects, these project managers have the experience needed to assist you from start-to-finish, from investigation on through to remediation. Your project manager has access to all the resources of ENSR Corporation including design, health sciences, construction management and on-site field services.

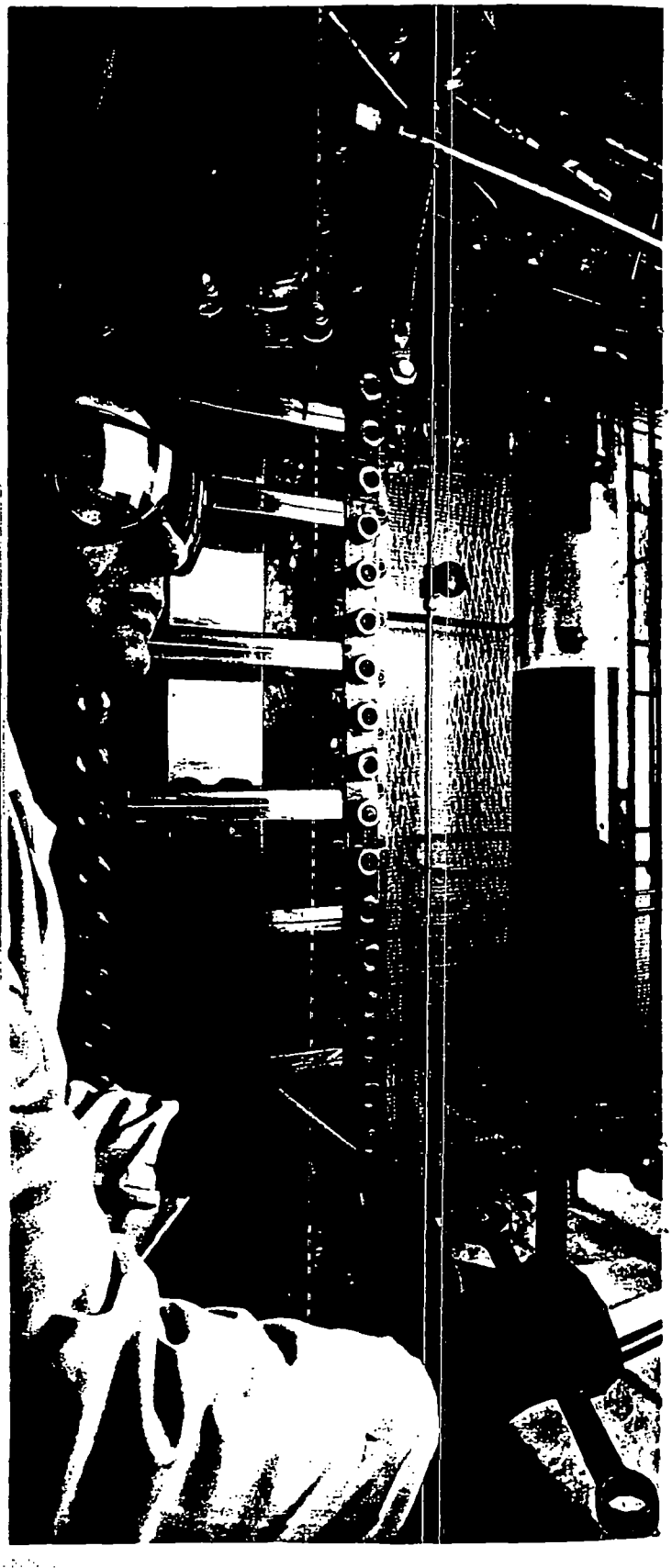
Our staff of over 800 scientists and engineers in 16 offices across the country stand ready to provide you integrated services or specific technical specialties depending on your preference and need.

Broad Range of Services

Hazardous Waste Management and Remediation

- RCRA Permitting, Closure and Corrective Action
- Waste Management and Waste Minimization
- Superfund and SARA Title III
- Remedial Investigations/Feasibility Studies
- Risk and Endangerment Assessments
- Groundwater Services and Remediation
- Remedial Design and Implementation
- Hazardous Waste Incinerator Design, Permitting and Trial Burns
- Bioremediation Feasibility and Implementation
- Facility Closure and Decommissioning
- Landfill Engineering
- Underground Storage Tank Management





Air Quality

- Model Research, Development and Application
- Acid Rain Programs
- Permitting and Compliance
- Pollution Control Engineering
- Air Toxics Control, Modeling, and Monitoring
- SARA Title III Compliance and Planning
- Risk Assessment, Reduction
- HASTE Emergency Response Planning System
- Waste Site and Landfill Testing and Monitoring

Environmental Management

- Regulatory and Policy Analysis
- Feasibility and Siting Studies
- Environmental Impact Reports
- Local, State and Federal Permitting
- Property Transfer Assessments
- Compliance Audits

Laboratory and Field Analytical Services

- Complete capability for air, water, waste, tissue and sediment sampling and analysis in support of projects

ENSR Information Services

We publish the ENVIRONET℠ customized compliance and audit information service, used at 500 industrial plants, as a key environmental management tool. ENVIRONET now covers 15 of the most industrialized states, in addition to federal regulations.

ENSR Technology

We keep ENSR on the leading edge of ever-changing cost-effective waste treatment and destruction technologies. ENSR has over 60 licenses and patents (issued or pending). Working closely with ENSR Consulting and Engineering, and ENSR Constructors, we evaluate technology to use for site remediation. ENSR Technology developed System 50℠ (used by ENSR Operations to reclassify PCB-contaminated transformers), a process for electrochemical destruction of PCBs and the Nite/Denite™ process for wastewater treatment.

ENSR Health Sciences

International Leader in Corporate and Community Health Issues

ENSR Health Sciences, formerly Environmental Health Associates, has over 10 years of highly acclaimed experience solving occupational and environmental health problems for industry, trade associations and law firms.

We have completed more occupational epidemiology studies than any other company or university, often involving new measurement methods. Our services include:

- Environmental and Occupational Epidemiology
- Toxicology
- Health Risk Assessment
- Medical Consulting and Health Surveillance
- Industrial Hygiene
- Litigation Support
- Health Information Search and Review Services
- Development of Health Information Systems

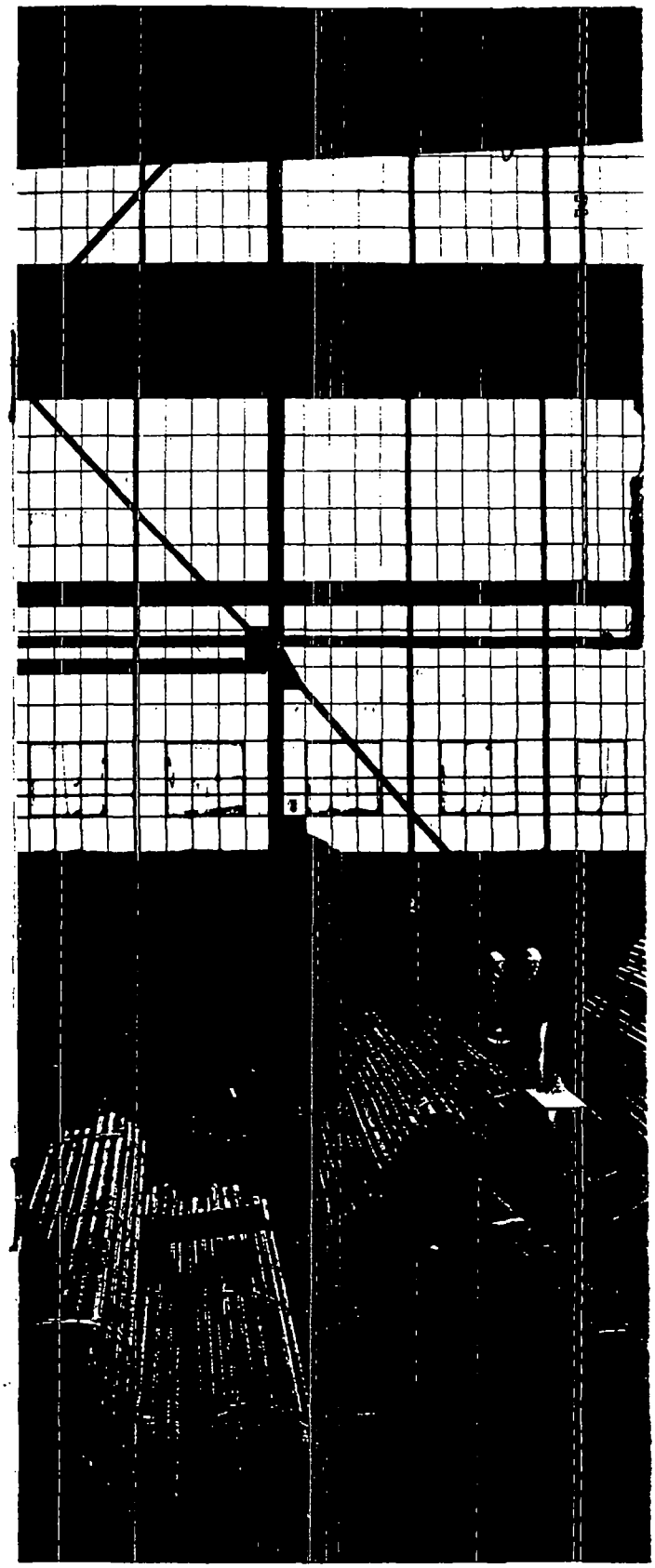
The Right Team for Your Needs

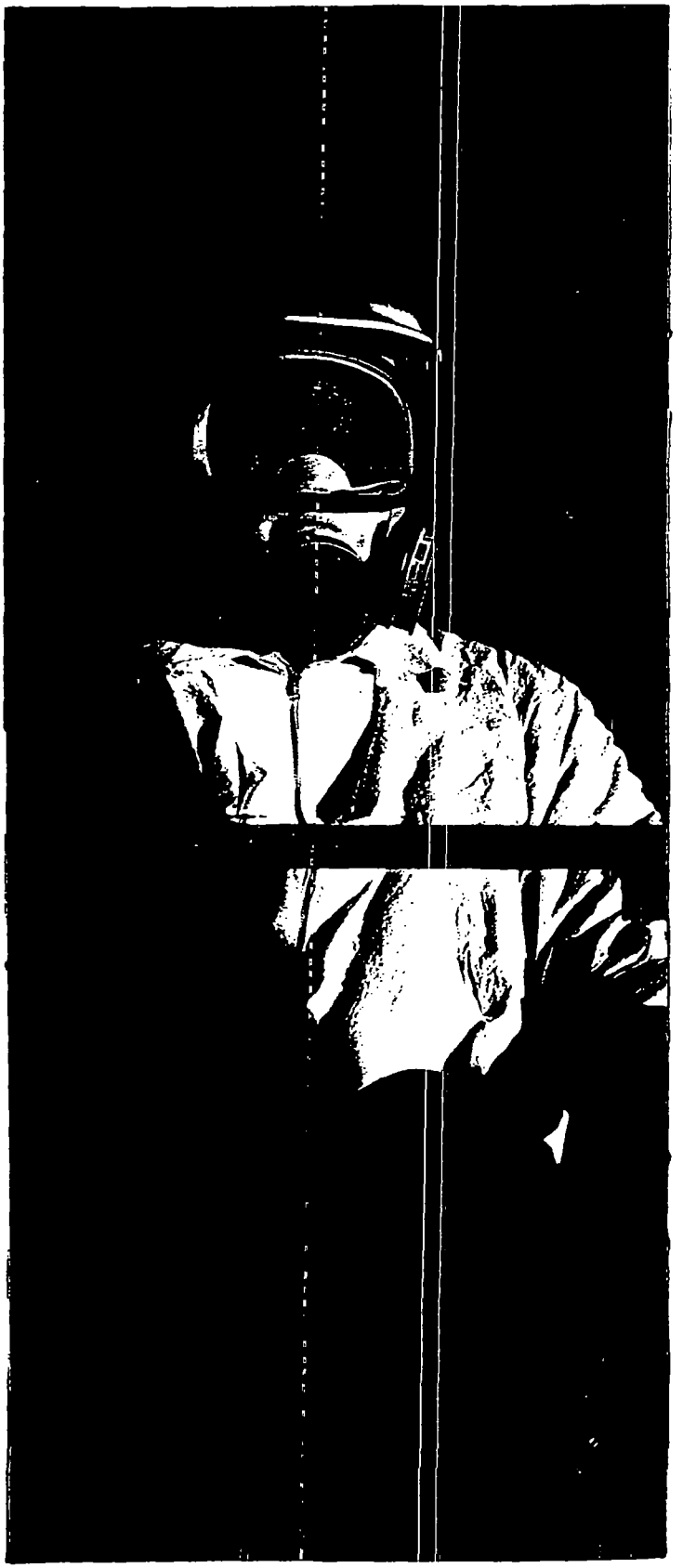
ENSR staff are experienced working with industrial managers, health professionals, labor unions, attorneys and community groups in handling even the most delicate situations. Our staff includes board-certified physicians, toxicologists, epidemiologists, nurse practitioners and biostatisticians, as well as industrial hygienists and regulatory specialists.

Our projects have involved employee complaints, real or threatened lawsuits and legislation indicating possible adverse health effects from a particular chemical or industrial process.

Practical Solutions to Difficult Problems

We often team with ENSR Consulting and Engineering to provide practical cost-saving advice on health-based standards related to environmental regulations. Together, we have been particularly successful negotiating realistic clean up standards at waste sites. To help you deal with the increasingly difficult challenge of employee record keeping, we are now offering CHIMES℠, our Computerized Health Information Management and Evaluation System.





ENSR Constructors

ENSR Constructors provides you with integrated engineering and construction services for remedial clean up. Our services include:

- Project/Program Management
- Facility and Site Remediation Services
- Decontamination and Decommissioning
- Underground Storage Tank Compliance
- Facility Closures
- RCRA TSD Facility Construction
- Superfund Site Clean Up
- Hazardous Waste Tank Certification

Dealing with Regulatory Oversight

Unlike most capital construction projects, remediation projects always involve third-party overview by regulatory agencies, and, in some cases, the public. Their input can have tremendous impact on the cost of your project. ENSR Constructors, unlike traditional engineer/constructors, take into consideration the regulatory impact during each step of your project. We use the nationally-known regulatory consulting "horsepower" within ENSR Corporation to ensure the best outcome for you, our client.

Advantages of ENSR's Integrated Team Approach

- Single project manager as point of contact
- Rapid mobilization and modification of project teams
- Regulatory feasibility and constructibility of the remedial solution performed before construction to save costly changes later
- Consistent quality assurance/control and health/safety programs start-to-finish
- Minimal impact of construction on your ongoing operations

Many clients have successfully used our integrated regulatory and construction approach. For example, at one Superfund site, EPA reversed their decision to require incineration and recommended bioremediation after a six-month demonstration conducted by ENSR. The result: the client will save over $75 million.

ENSR Operations

ENSR Operations is the on-site field service division of ENSR Corporation. We operate equipment and processes to treat, reduce or destroy waste.

Leader in Solving PCB Problems

ENSR Operations, formerly the Sunohio Company, brings you 12 years of experience specializing in the solution of PCB problems. We developed the world's first technology for mobile chemical PCB destruction with complete oil recovery called PCBX℠.

We also reclassify highly-contaminated, askarel-type transformers to non-PCB status through our System 50℠ process. This system helps our customers avoid the costs associated with unnecessary disposal and replacement of transformers with years of useful life remaining. With System 50℠, originally developed by ENSR Technology, you can reclassify in as little as three to six months with only one short period of downtime.

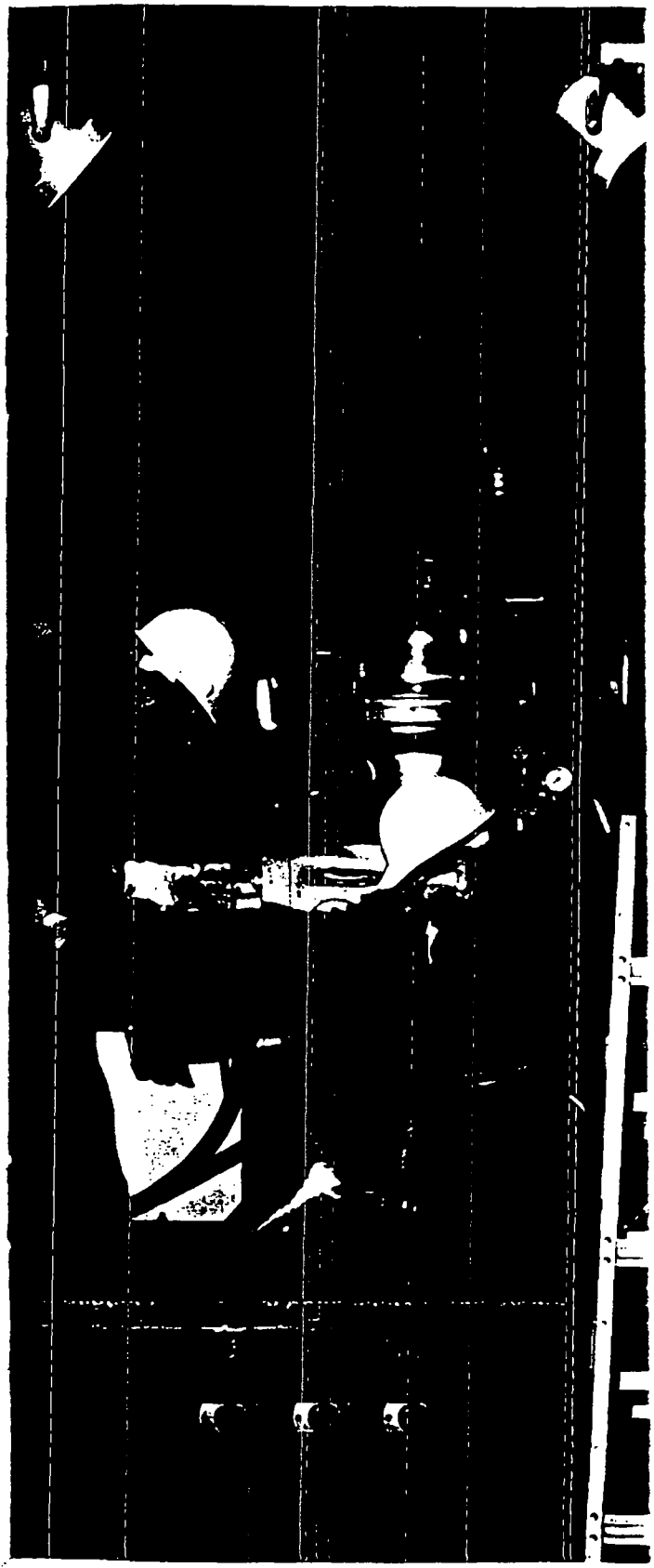
Working with the other divisions of ENSR, we perform PCB spill investigations, clean up plans, and soil and groundwater remediation. We have extensive experience solving any PCB problem you may face.

Our PCB field services include:

- PCBX℠ Chemical Treatment and Recycle of PCB Contaminated Mineral Oil Filled Transformers and Bulk Oil
- Retrofilling of Mineral Oil Filled Transformers
- System 50℠ Askarel Transformer Reclassification
- Turnkey Disposal and Replacement of PCB Transformers
- PCB and Transformer Oil Sampling and Laboratory Analysis

Effective On-Site Waste Management

ENSR professionals can help you manage the cost of long-term, in-plant or on-site hazardous waste problems. Our field service crews can help you minimize the costs and time needed to deal with starting up and running special waste management projects such as groundwater treatment plants and bioremediation projects.



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In December we are moving to larger offices.
Until then,

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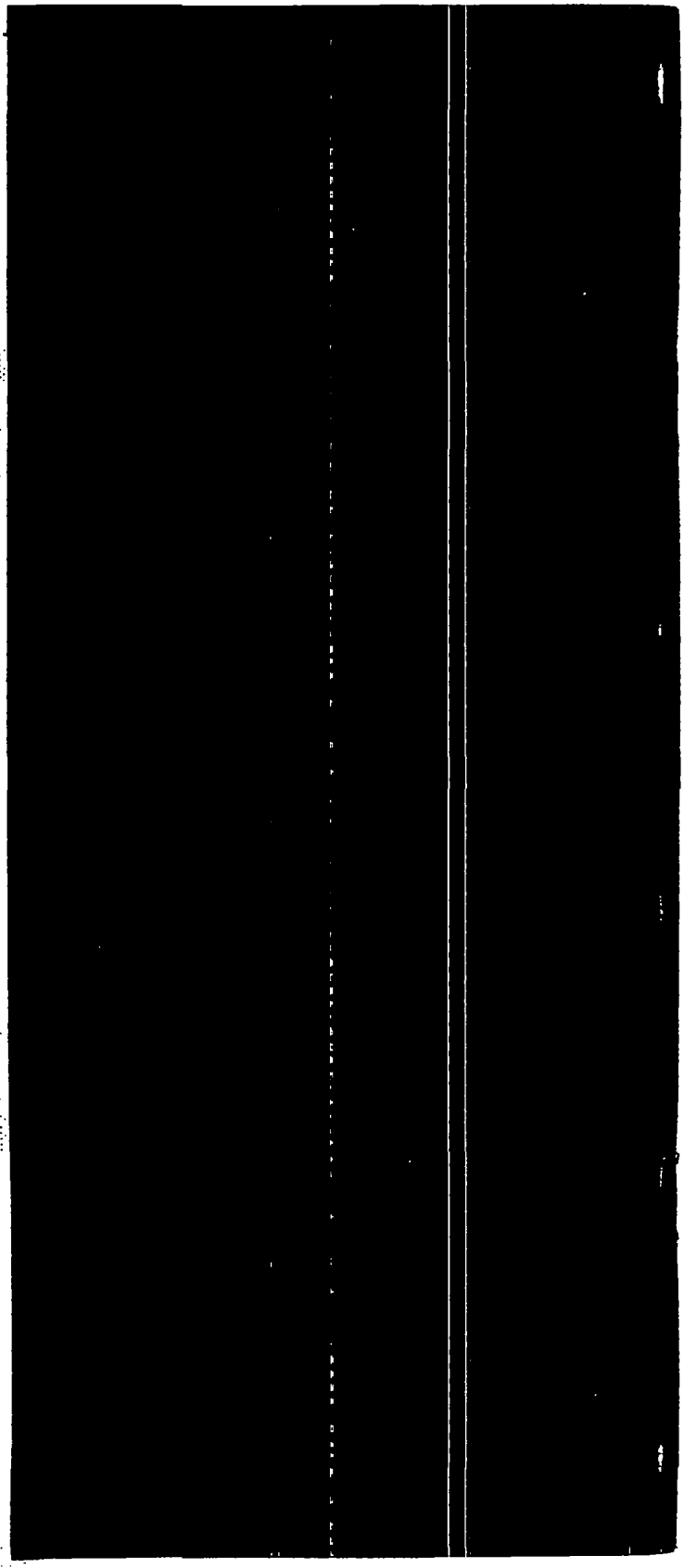

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